

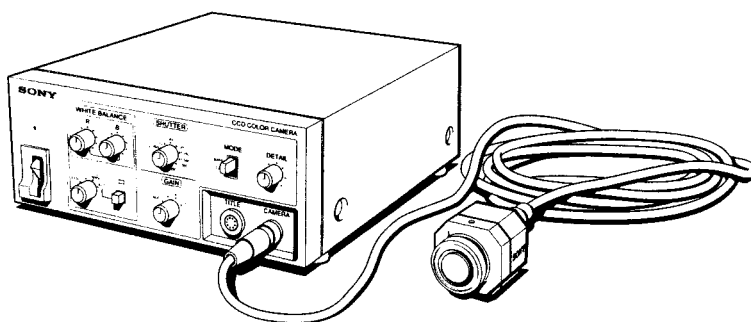
SONY®

COLOR VIDEO CAMERA

DXC-C1

DXC-C1MDP

SERVICE MANUAL



SAFETY RELATED COMPONENT WARNING

Components identified by shading and  marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

CAUTION

Make sure of connector numbers being matched. Otherwise you may get an electric shock or the product may be damaged.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

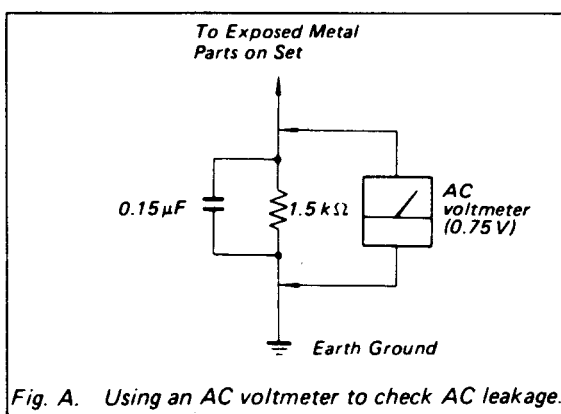


Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1 OPERATION

1-1. FEATURES

The DXC-C1/C1MDP is a 1/2-inch color video camera which uses a CCD (Charge Coupled Device), a solid state image sensor.

Mechanical Features

Camera head unit

- The unit is small and lightweight, so you can use it in a variety of locations.
- Being watertight, the unit can be submerged in solution for the purpose of cleaning.
- The flange focal length can be adjusted using the adjustment screw.

Camera control unit

Provides a number of different types of connectors, allowing you to connect it to many different types of equipment.

Video Features

High-quality picture

This unit can capture high-resolution pictures.

RGB output connector

In addition to a composite video signal output, the camera has an RGB signal output, so you can connect it to an RGB monitor or an image processing device.

Y/C separated video output

By connecting this unit from the S-video connector, the camera outputs the luminance (Y) signal and the chrominance (C) signal separately. Using the optional cable to connect the DIN 4-pin connector, you can connect a monitor or VCR with a Y/C video input connector. This gives you a picture with a minimum of flicker and/or color blur.

Function Features

Four modes for white balance adjustment

You can choose the appropriate mode (AUTO, 3200K, MANU, or ATW) according to the lighting conditions.

Ten shutter speed settings

This camera has ten electronic shutter settings: OFF, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, FL (flickerless), and CCD IRIS™*.

Four modes for gain control (video output level)

You can choose the gain control (video output level) from among four modes, according to the lighting conditions: AGC (Auto-Gain Control), 0 dB, 6 dB, and 12 dB.

External sync system

When you use a video switcher to control two or more cameras, you can input the same sync signal to all of them so that they output pictures of the same quality.

Adjusting the details

The contours of a picture can be changed by the DETAIL control. Turn the control clockwise, and the contours will become clearer.

White balance level adjustment

You can adjust the red and blue color contrast levels.

Title display

With the optional title generator, alphabet or numeric characters can be superimposed to place a title on a picture picked up by the camera. The date and time can also be superimposed.

* CCD IRIS™ is a registered trademark of Sony corporation.

1-2. PRECAUTIONS

Safety

- Operate the unit only with a power source specified in the “Specifications” section on page 1-25.
- Should any solid object or liquid fall into the camera control unit, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug, Never pull the cord itself.

Transport and storage locations

Do not transport or store the unit under any of the following conditions:

- In excessive heat or cold; permissible temperature range: -20°C to 60°C (-4°F to 140°F).
- In excessive wet or dry locations; permissible humidity range: 20% to 90% (no condensation allowed.)

Operating locations

Do not use the unit under any of the following conditions:

- In excessive heat or cold; permissible temperature range: 0°C to 40°C (32°F to 104°F).
- In excessive wet or dry locations; permissible humidity range: 20% to 80% (no condensation allowed).
- In direct sunlight or near heaters. Remember that the temperature inside a locked automobile in summer can rise as high as 50°C (122°F).
- In damp or dusty locations.
- In locations subject to vibrations.
- Near strong magnetic fields.
- Near television or radio stations generating strong radio frequency energy.

Care of the unit

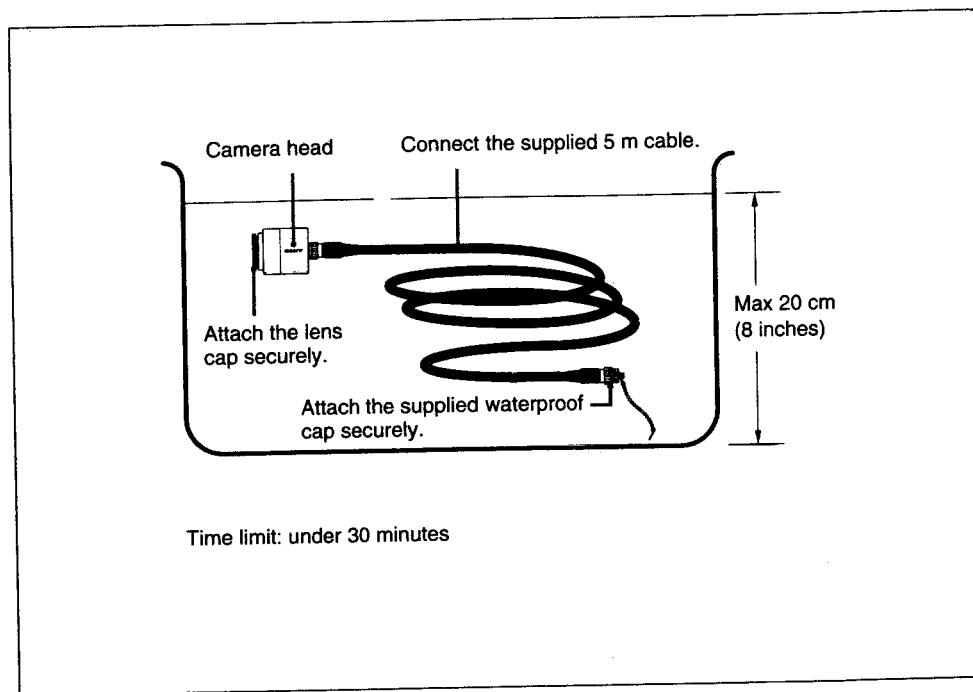
- Remove dust or dirt from the surface of the lens optical filter with a blower.
- To clean the camera control unit use a dry, soft cloth to clean the body. If it is very dirty, use a cloth dampened with a small quantity of neutral detergent, then wipe dry. Avoid the use of volatile solvents such as thinners, alcohol, benzene, and insecticides. They may damage the surface finish or impair the operation of the camera.
- To clean the camera head unit refer to “Cleaning the camera head unit” on page 1-4.

Handling of the lens

As the lens could be damaged if not attached properly, make sure to see the section “Attaching the Lens” on page 1-9.

Cleaning the camera head unit

If it is necessary to clean the camera head unit, be sure to attach the 5m cable, the lens cap, and the waterproof cap (all supplied).



- The optional 10m cable is not waterproof, and should not be used when cleaning the camera head unit.
- When disinfecting the camera head unit immerse it in 20 cm of solution for no more than 30 minutes.
- The seal on the waterproof cap will wear out over time and should be replaced or checked once a year.
- When you need to replace the waterproof seal, contact Sony or your authorized Sony dealer.

The following solutions can be used to clean the camera head unit:

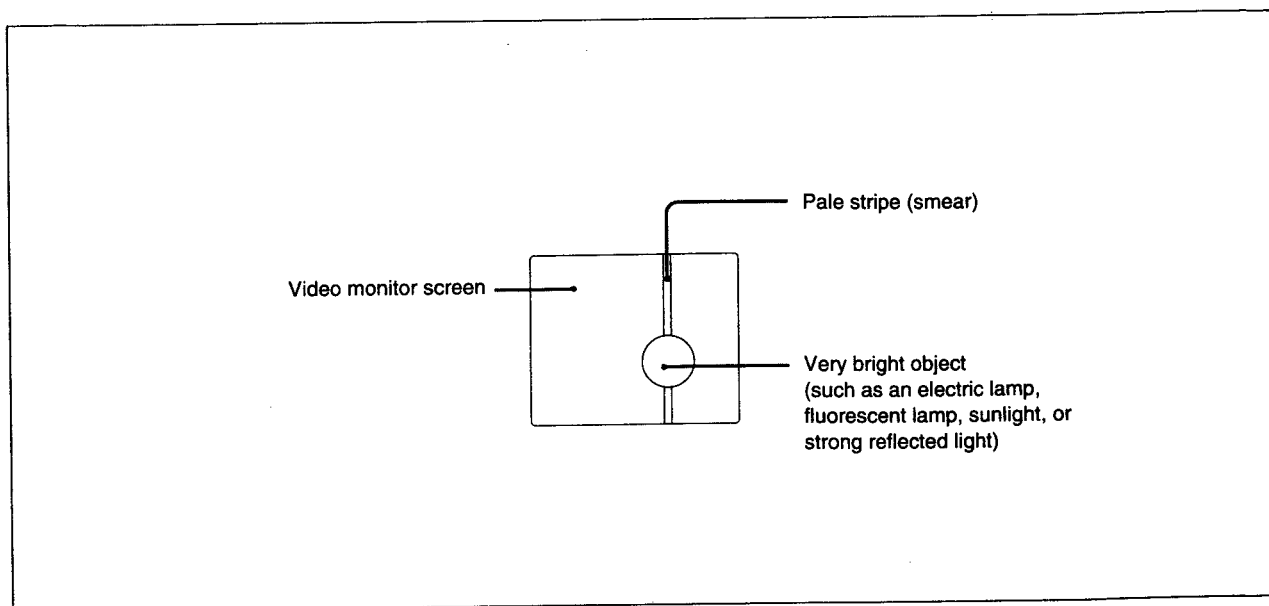
- Disinfectant ethanol
- Isopropyl alcohol
- Formalin
- Glutaraldehyde
- Povidone iodine

1-3. CCD CHARACTERISTICS

The following conditions that may be observed during the use of a CCD video camera are not associated with any fault of the camera.

Smearing

The picture may be smeared when a very bright object is shot.



Patterned noise

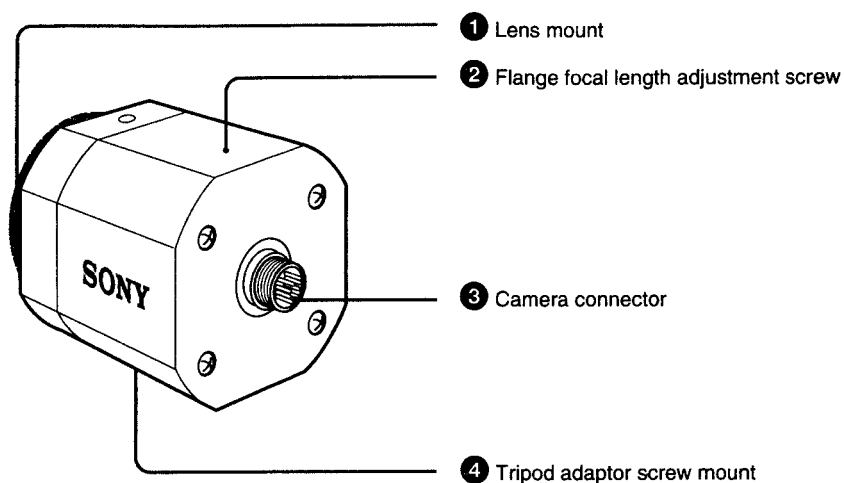
This may appear over the entire monitor screen when the camera is operated at a high temperature.

Jagged picture

When thin stripes straight lines, or the like are shot, the image monitored on the screen may appear jagged.

1-4. LOCATIONS AND FUNCTION OF PARTS AND CONTROLS

Camera Head Unit



① Lens mount

Attach a C-mount lens or an adaptor for a microscope (not supplied).

② Flange focal length adjustment screw

When using a zoom lens, it may be necessary to adjust the flange focal length (the distance between the lens mounting plane and the image plane). Once the flange focal length has been adjusted, readjustment is not necessary as long as the same lens is mounted on the camera.

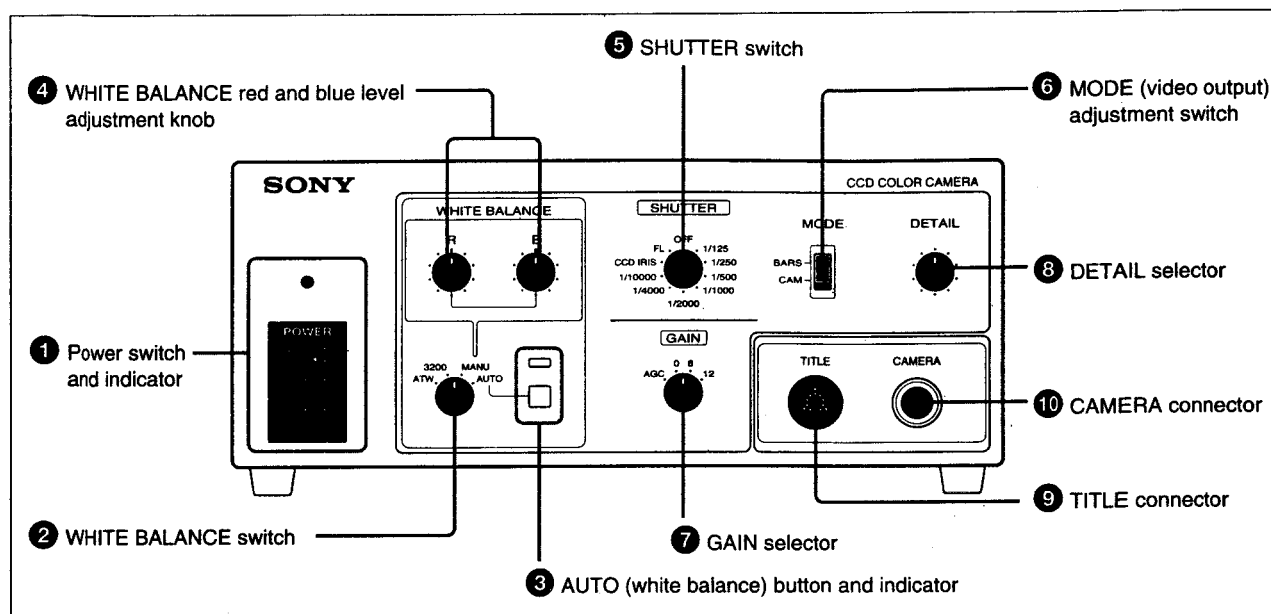
③ Camera connector

Use to connect the supplied 5m cable.

④ Tripod adaptor screw mount

Use to connect the supplied tripod adaptor.

Camera Control Unit (Front Panel)



① POWER switch and indicator

Set to "I (ON)" to supply the power to the camera control unit, the camera head, the lens, and the supplied title generator.

Set to "O (OFF)" to turn the power off.

② WHITE BALANCE switch

Select the mode of white balance adjustment according to the lighting conditions.

③ AUTO (white balance) button and indicator

When the WHITE BALANCE switch ② is set to "AUTO," press this button and the white balance is adjusted automatically.

④ WHITE BALANCE red and blue level adjustment controls

The level of the R (red) component and the B (blue) component of the signal can be adjusted. These controls are activated only when the WHITE BALANCE switch ② is set to "MANU."

⑤ SHUTTER switch

To select the desired shutter speed, set to the corresponding position.

⑥ MODE (video output) adjustment switch

Selects the output video signal of the camera control unit.

CAM: The video signal picked up by the camera is output.

BARS: Color bar signals used for adjusting the monitor is output.

⑦ GAIN selector

If sufficient brightness cannot be obtained due to lighting conditions, the output video signal level can be increased with this selector. For shooting under normal conditions, set the selector to 0 dB.

⑧ DETAIL selector

Use to adjust the contours of objects you are viewing.

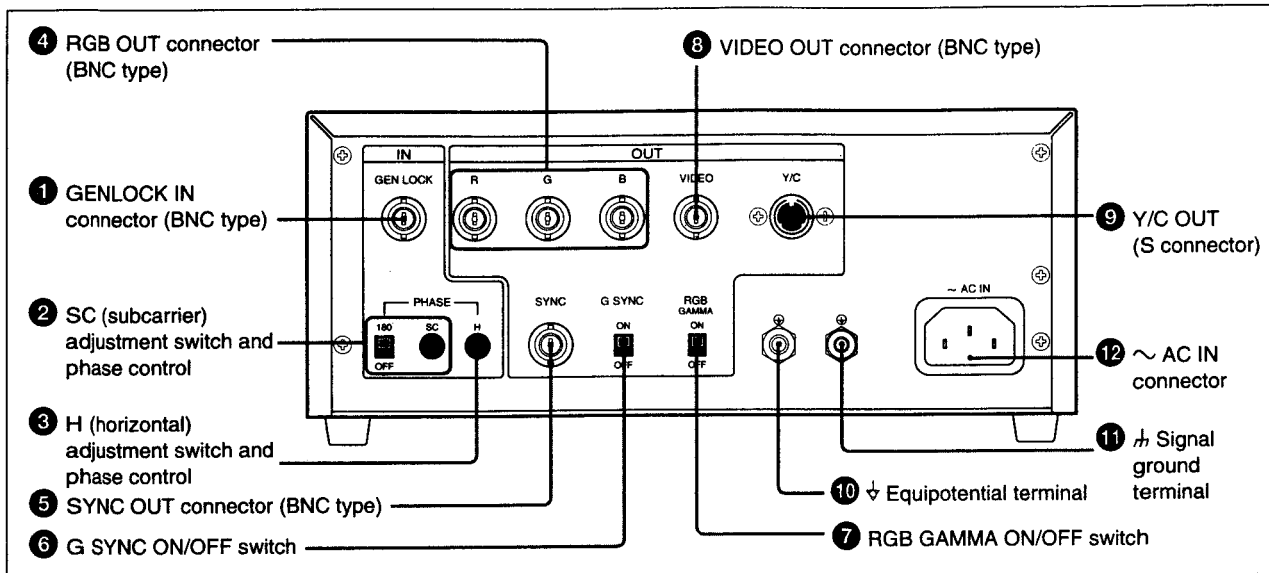
⑨ TITLE connector

Use to connect the optional title generator. (TGR-750)

⑩ CAMERA connector

Use to connect the cable from the camera head.

Camera Control Unit (Rear Panel)



1 GEN LOCK IN connector (BNC type)

Use this connection to operate multiple cameras in an external sync system.

2 SC (subcarrier) adjustment switch and phase control

To operate the camera synchronizing external sync signals, adjust the subcarrier phase difference between the external sync signal and the camera output signal.

3 H (horizontal) adjustment switch and phase control

To operate the camera synchronizing external sync signals, adjust the horizontal sync phase difference between the external sync signal and the camera output signal.

4 RGB OUT connector (BNC type)

A picture picked up by the camera is output as the R, G, and B signals. Connect to the R, G, and B input connectors on a monitor, VCR, computer, etc.

5 SYNC OUT connector (BNC type)

Outputs the sync signal. To synchronize external equipment such as a video monitor with this unit, connect to the sync input connector on the external equipment.

6 G SYNC ON/OFF switch

Add the sync signal to the G signal output.

7 RGB GAMMA ON/OFF switch

Corrects the gamma circuit, which compensates for the luminance characteristics of the cathode ray tube by increasing the output level of the input signal with lower luminance.

8 VIDEO OUT connector (BNC type)

Outputs the camera video signal.

9 Y/C OUT (S connector)

An image picked up by the camera is output as the Y/C signal (luminance signal/chrominance signal). Connect to the Y/C signal input on a monitor or VCR.

10 ⚡ Equipotential ground terminal

Connect to the equipotential plug to bring the various parts of a system to the same potential.

11 ⚡ Signal ground connector

12 AC IN connector

Connect the supplied AC power cord.

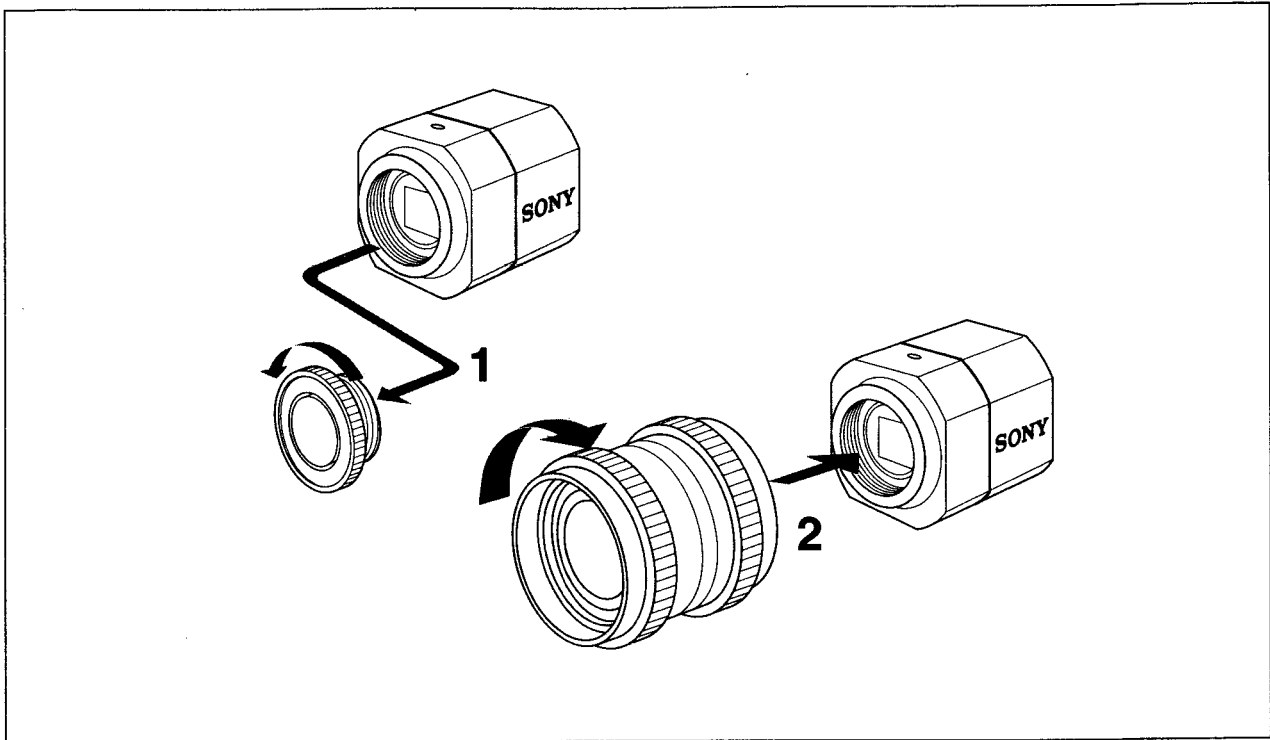
Note

If you make VBS, Y/C, and RGB output connections to the same monitor, the color reproduction might not be very clear. This is because the VBS and Y/C output connections have the same signal but are routed differently. This is not a malfunction on the part of the unit.

1-5. INSTALLATION

Attaching a Lens or a Microscope Adaptor

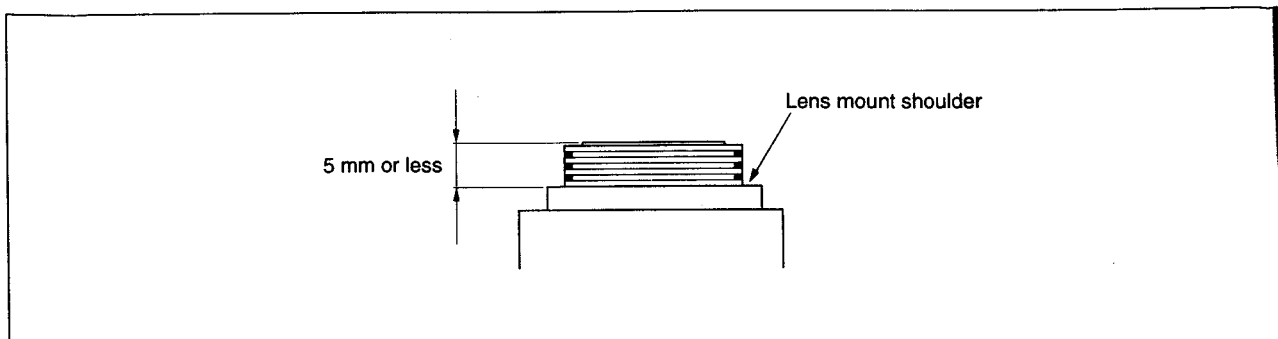
You can mount a C-mount lens to the camera head as shown below. To mount a microscope, the appropriate adaptor should be mounted to the camera head. An adaptor can be attached to the Camera head unit using the same procedure as that for the C-mount lens.



- 1** Turn the camera head mount clamp ring fully counterclockwise.
- 2** Turn the mount clamp ring clockwise, and tighten it firmly

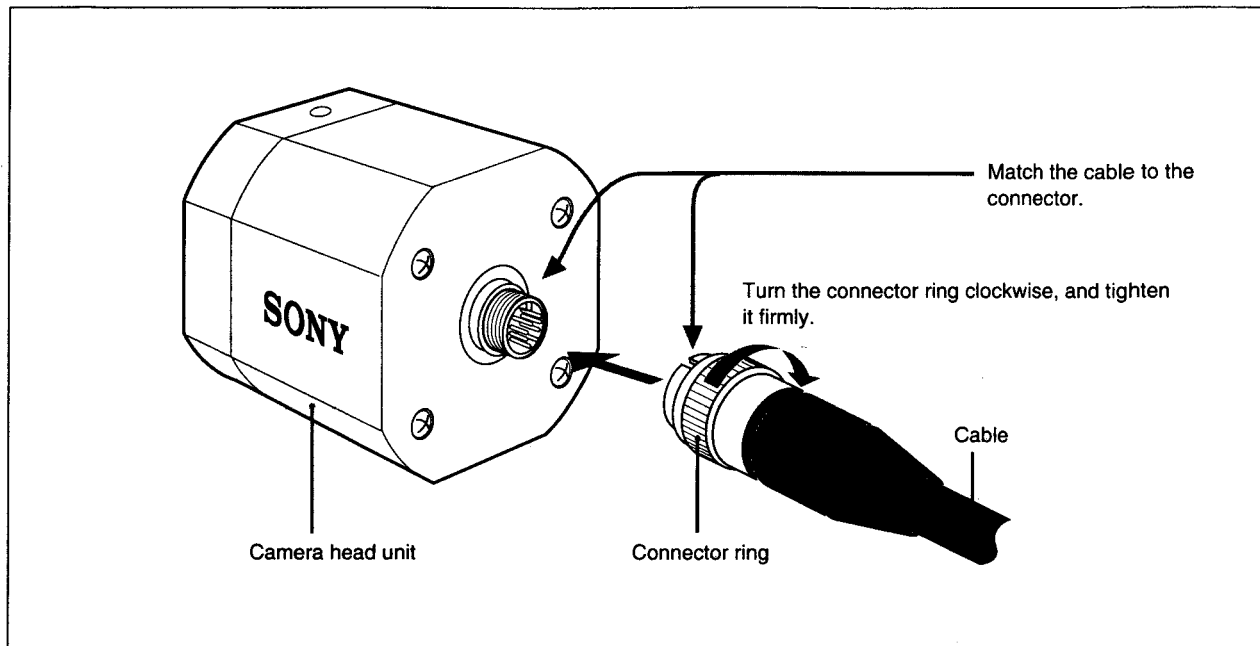
Attaching the Lens

You can mount a C-mount lens, as long as it does not project more than 5 mm for the lens mount shoulder.

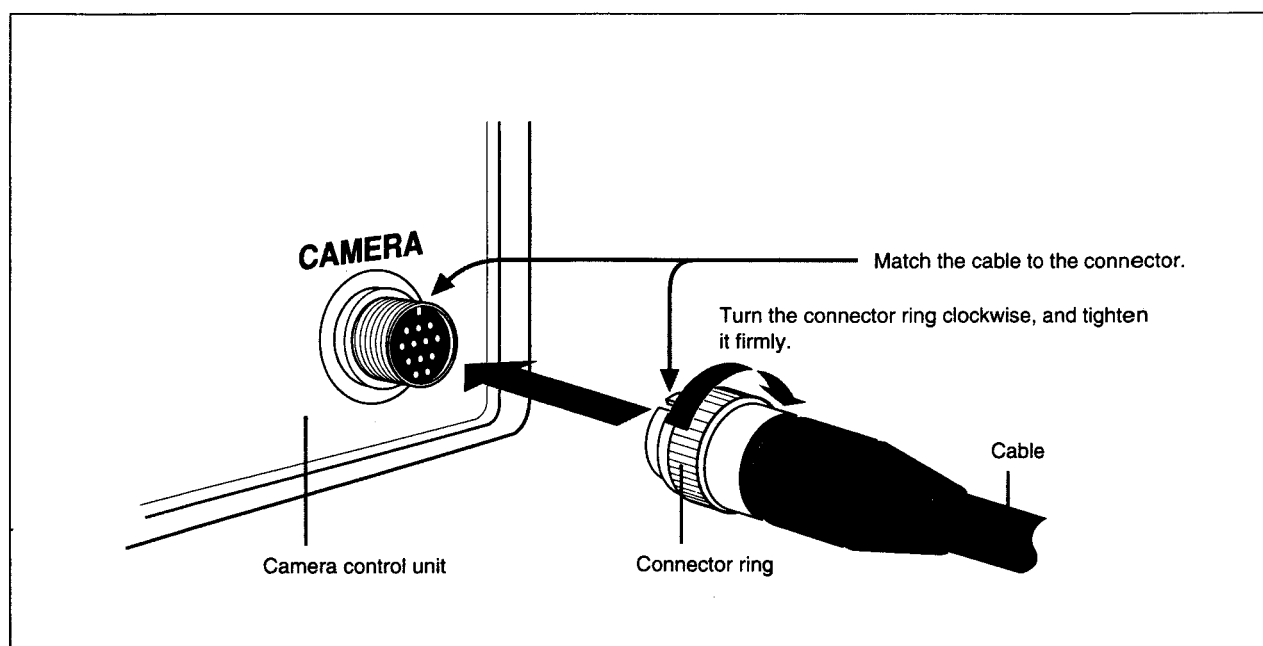


Connecting the Camera Cable

Camera head unit and cable



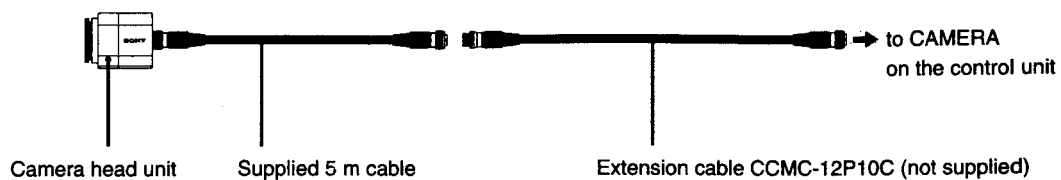
Camera control unit and cable



Note

Be sure that you have made the correct male/female connections. If you have made the incorrect connections you could damage the unit.

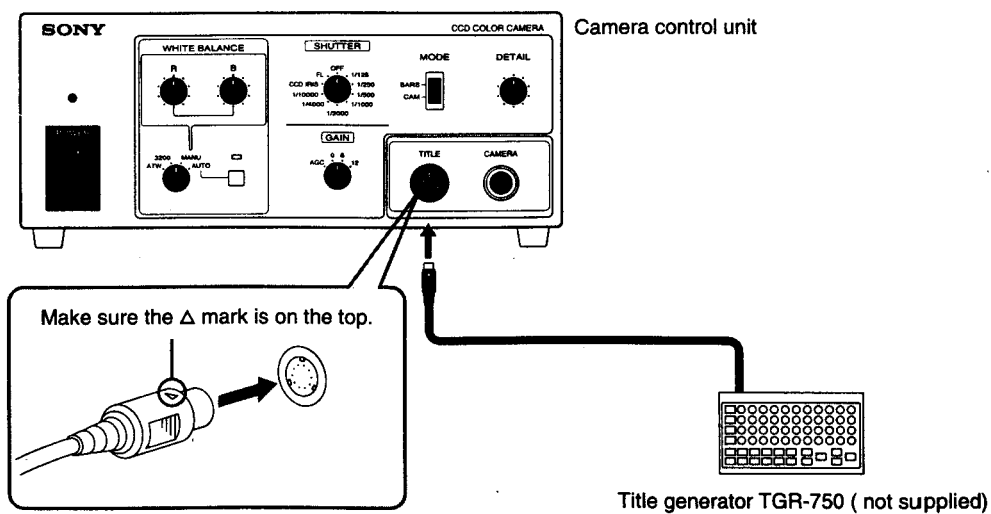
Connecting the Extension Cable



Note

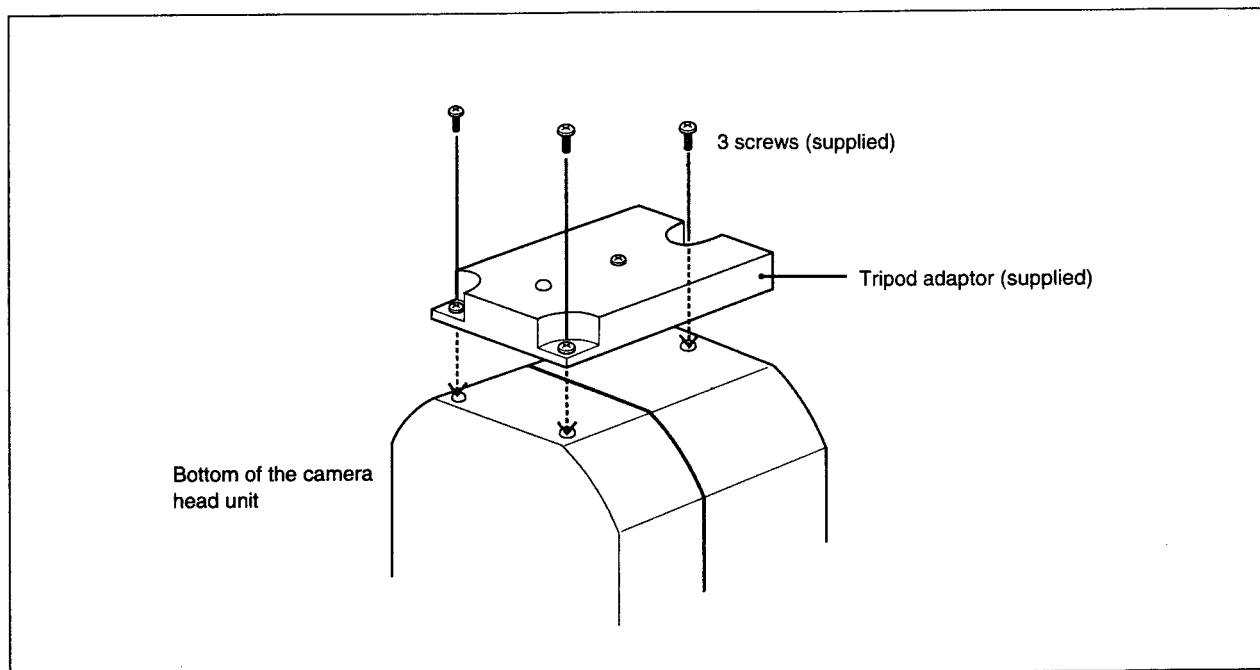
The 10 m extension cable (not supplied), is not waterproof.

Connecting the Title Generator



Connecting the Tripod Adaptor

You can connect the supplied tripod adaptor using the supplied 3 screws to the camera head.

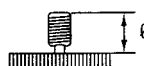


Suitable mounting screw

1/4" UNC (20 pitch)

ℓ : 4.5 mm $\pm$ 0.2 mm (ISO standard)

0.197" (ASA standard)

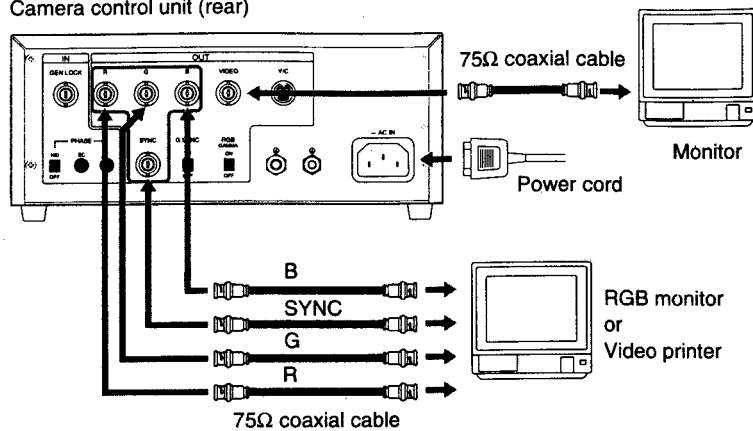


For more information about installation, consult your authorized Sony dealer.

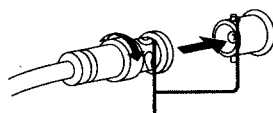
1-6. CONNECTIONS

Connecting a Video Monitor and a VCR

Camera control unit (rear)



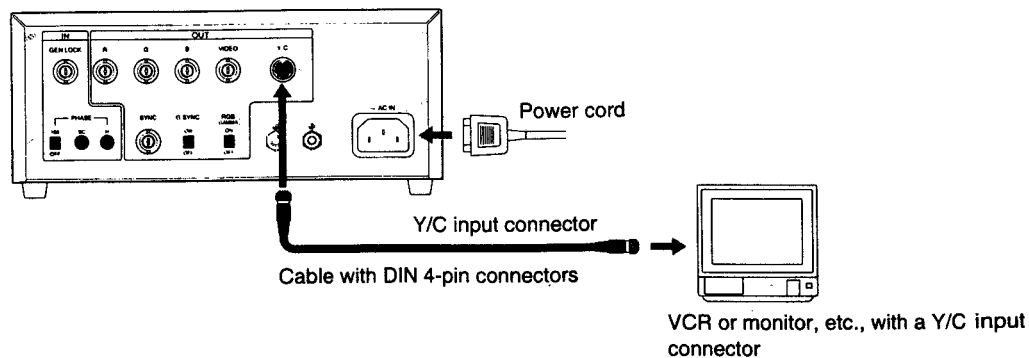
BNC type connector



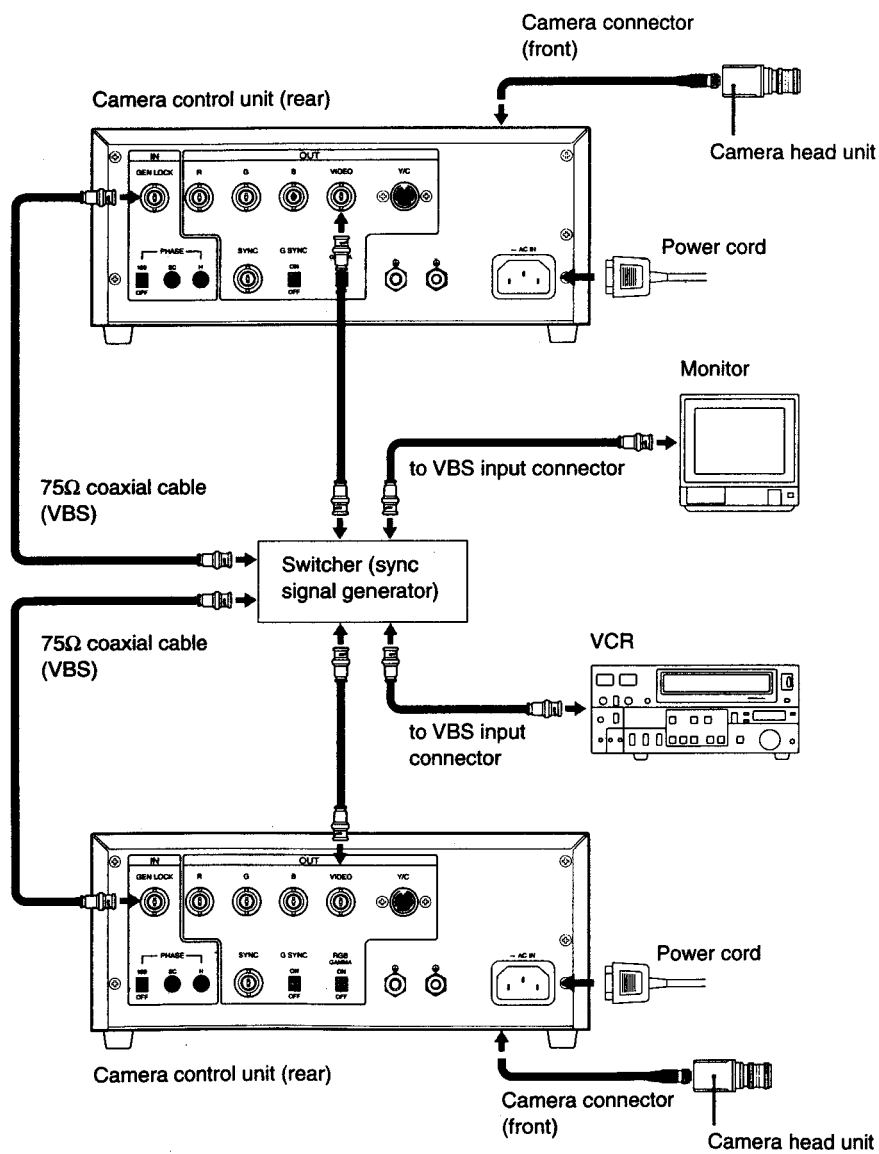
Insert into the slot and tighten the ring clockwise
To remove, turn the ring counterclockwise and then pull out.

Connecting a Monitor with a Y/C Input Connector

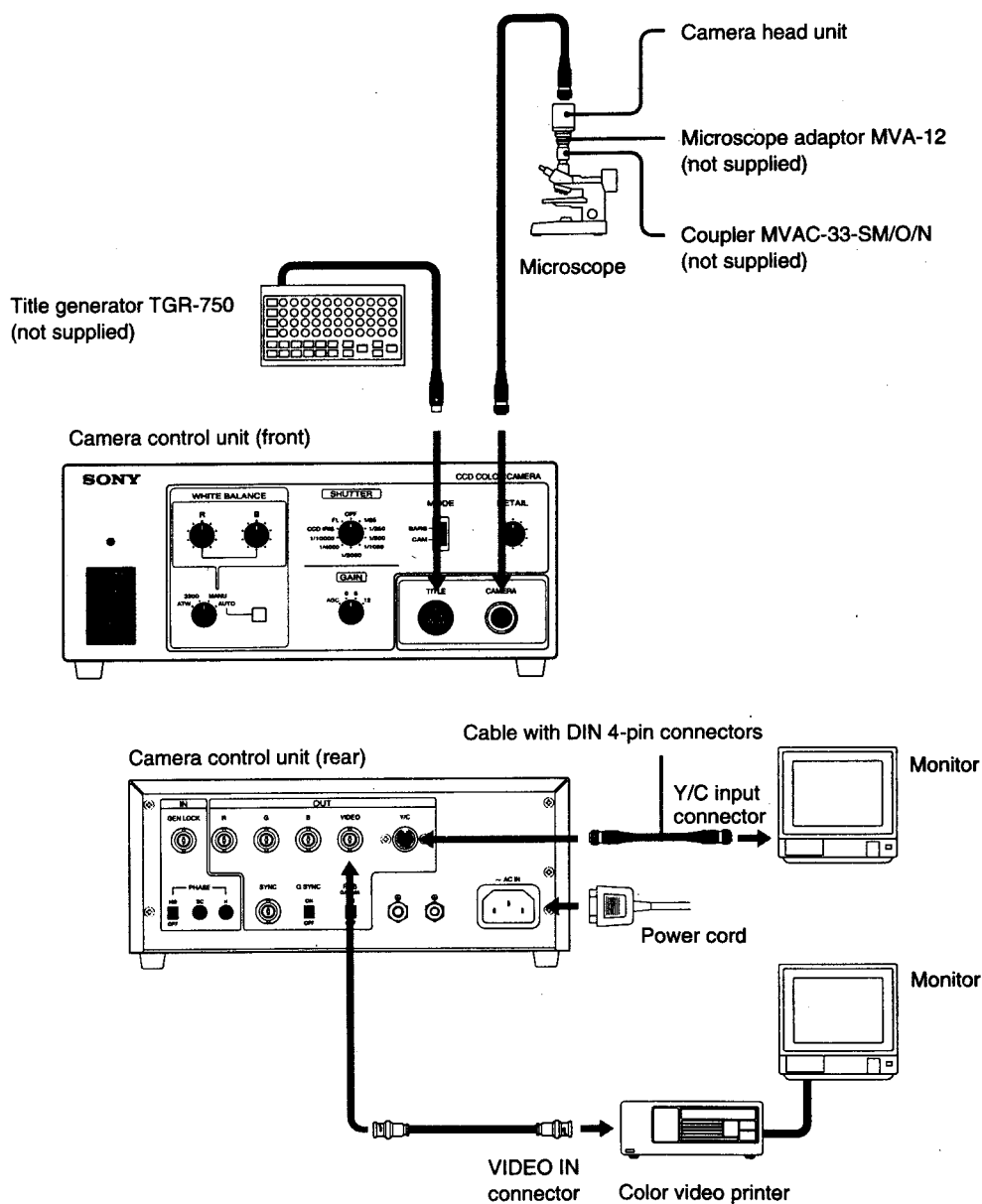
Camera control unit (rear)



Connecting Multiple Synchronized Cameras



Connecting a Microscope

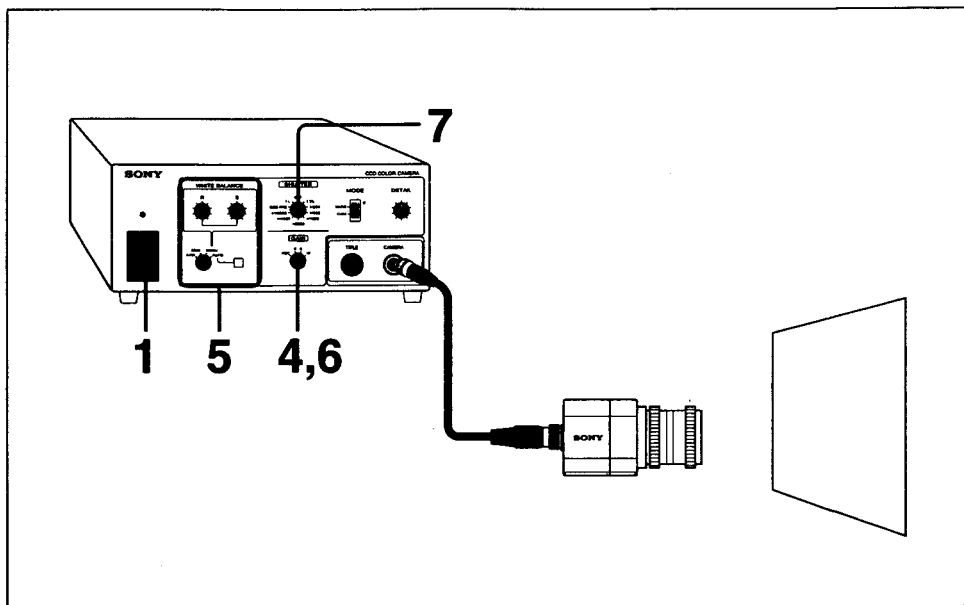


Note

When connecting a microscope to the camera head unit make sure to use the proper adaptor (not supplied). For more information about the MVA-12 microscope adaptor, contact your authorized Sony dealer.

1-7. BASIC OPERATION

Standard settings and basic operation when using one camera. Follow the operating steps as explained below.

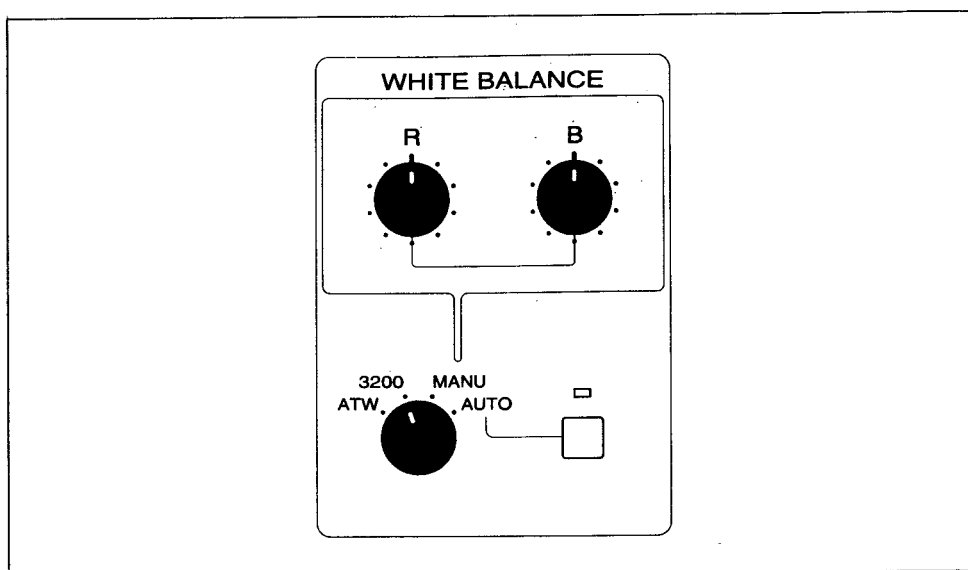


- 1** Turn on the power of the camera control unit and the connected equipment.
- 2** Adjust the lighting conditions for the object you are viewing.
- 3** Position the camera.
- 4** Set the GAIN switch on the camera to 0 dB.
- 5** Adjust the white balance. (See page 1-17.)
- 6** If necessary, adjust the gain control. (See page 1-19.)
- 7** Set the SHUTTER switch to the desired shutter speed. (See page 1-20.)
- 8** Start recording.

1-8. ADJUSTMENTS

Adjusting the White Balance

Select the mode of white balance adjustment according to the lighting conditions by setting the WHITE BALANCE switch to one of the four positions indicated in the illustration and described in the table below.



Mode/Switch position	Shooting conditions
AUTO (auto white balance)	When the AUTO button is pressed, the white balance is adjusted according to the color temperature of the subject automatically. The adjusted white balance value is stored in the built-in memory until readjustment. This mode is suitable for repeated shooting under the same conditions.
MANU (manual white balance)	You can control the white balance manually in this mode. When you set the white balance to this position you can adjust the red color effect using the R (red) selector, and the blue color effect using the B (blue) selector. The standard position can be reset easily by turning the R and B selectors to their center positions until a slight click is felt.
3200	3200 K (fixed): Suitable for indoor shooting under incandescent light.
ATW (auto tracing white balance)	The white balance is adjusted according to the transition of the color temperature of the subject. This mode is suitable for shooting with varying lighting conditions.

Automatic white balance adjustment

- 1** Set the WHITE BALANCE switch to "AUTO."
- 2** Shoot a white object (such as white paper or a white wall) so that it fills the screen.
- 3** Press the AUTO button when the white balance has been adjusted.
- 4** The indicator lights steadily for approximately two seconds.

Memory of the automatic white balance adjustment value

The adjusted white balance is stored in the built-in memory and it is retained even if the camera is turned off. When the white balance is set to AUTO the next time, the white balance is set to the value retained in the built-in memory.

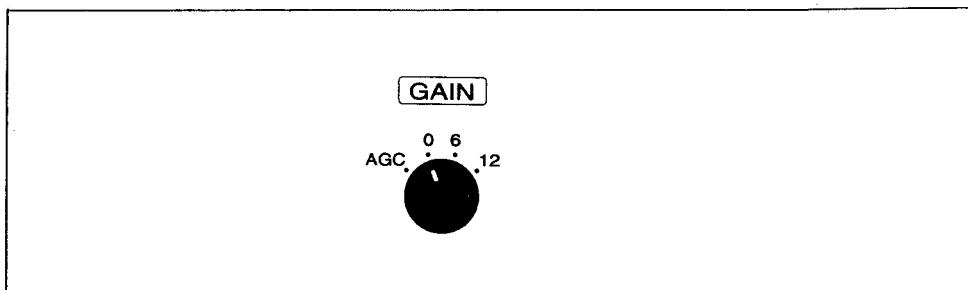
When the white balance cannot be adjusted automatically

When the white balance adjustment is incorrect, adjust it again as indicated in the following table.

Lighting condition	Indicator	Corrective measures
Too dark	flashes	If the lighting is insufficient, open the iris to increase the lighting, then press the AUTO button again.
Too bright	light steadily	If the lighting is excessive, the colors on the display will not appear as they should. This indicates that white balance adjustment is incorrect. In this case, stop down the lens and press the AUTO button again.

Adjusting the Gain Control (Video Output Level)

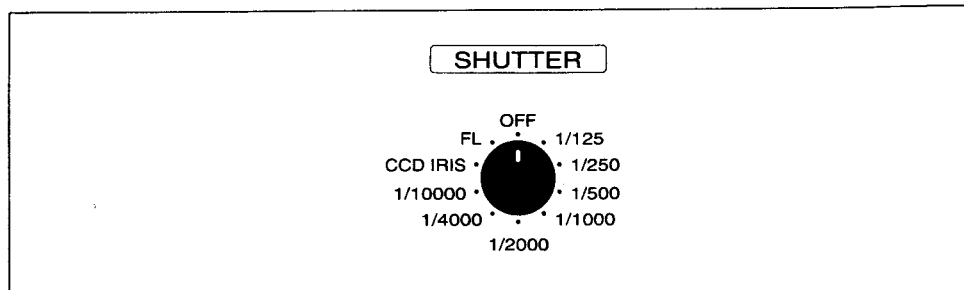
To adjust the gain control (video output level), set the GAIN switch in the appropriate position.



Gain selector position	Video output level
AGC (automatic gain control)	The video output level is automatically adjusted according to the lighting condition. Set the switch in this position when the lighting conditions are subject to change, as in conditions outdoors.
0 dB	Generally, set the switch in this position.
6 dB	The video output level is raised by 6 dB or 12 dB depending on the position of the selector. When the lighting is insufficient and the picture observed on the monitor is too dim, set the switch in one of these positions.
12 dB	

Selecting the Shutter Speed

To select the desired shutter speed, set to the corresponding position.



Shutter switch position	Operating condition, shutter speed
OFF	The shutter speed function does not operate.
1/125	Use these settings to select the desired shutter speed (sec.).
1/250	
1/500	
1/1000	
1/2000	
1/4000	
1/10000	
CCD IRIS	Even if your lens is a manual iris lens, you can use this setting so that brightness and color contrast is adjusted automatically.
FL (flickerless)	This setting is provided to prevent the picture from flickering when using a 50 Hz power supply.

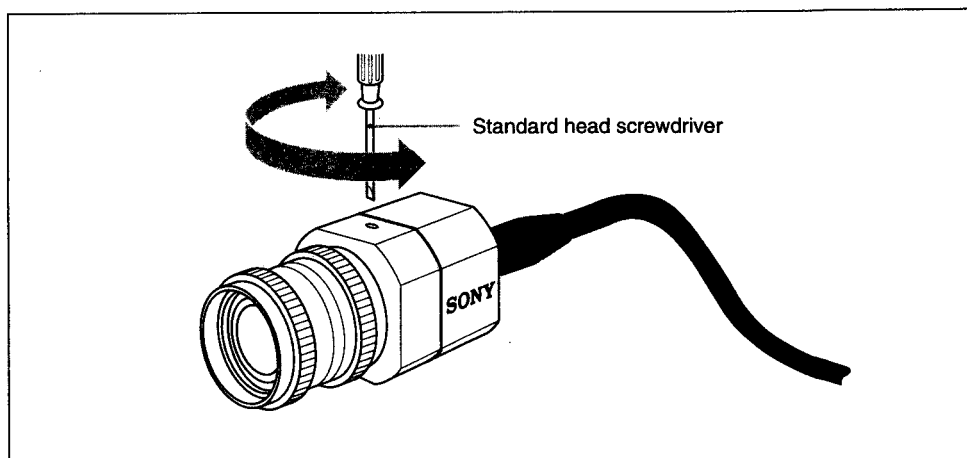
Note

Using an auto-iris lens while in CCD IRIS mode may sometimes produce a picture of less than optimum quality. If this is the case, set the SHUTTER switch to a fixed shutter speed (ranging from OFF to 1/10000 sec). When using this unit in CCD IRIS mode under fluorescent light, etc., a slow color change may occur. To avoid this, set the SHUTTER switch to FL or OFF and use the auto-iris lens.

Adjusting the Flange Focal Length

You can adjust the flange focal length using a standard head screwdriver.

- 1** Open the iris fully.
- 2** Point the camera at a subject approximately 3 meters (10 feet) away.
- 3** Set the zoom in the telephoto position.
- 4** Turn the focus ring to focus on the subject while observing the monitor screen.
- 5** Set the zoom in the wide-angle position.
- 6** Turn the flange focal length adjustment ring until the same object is in focus.



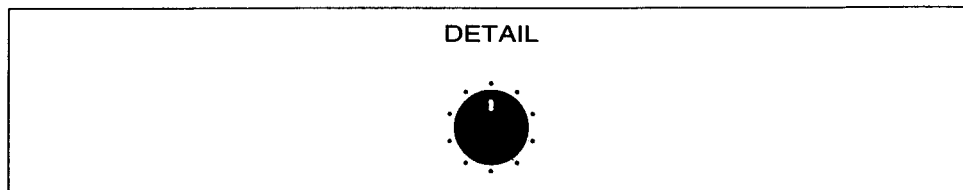
Note

Do not turn the focus ring while making this adjustment.

- 7** Repeat steps **3** to **6** until the subject is in focus both when the zoom is in the telephoto position and when it is in the wide-angle position.

Adjusting the Detail

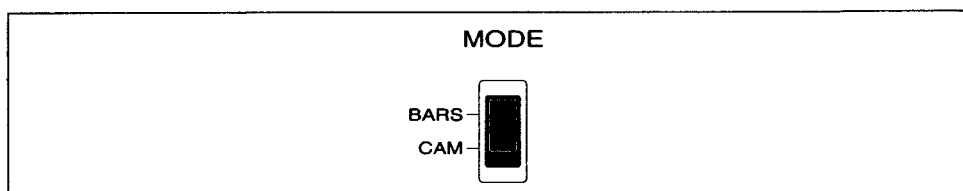
The contours of a picture can be changed by the DETAIL control.



Turn the control clockwise for sharper contours and counterclockwise for softer ones. Normally set this control to the center position.

Adjusting the MODE (Video Output)

With the MODE selector you can choose the output video signal for the camera control unit.

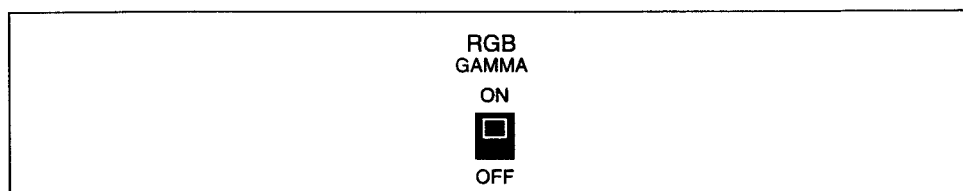


CAM: The video signal picked up by the camera is output.

BARS: Color bar signals used for adjusting the monitor is output.

Adjusting the RGB Gamma

To obtain lifelike color reproduction of the dark parts of the picture by compensating the luminance characteristics of the cathode ray tube against the input signal level, the input signal from the Camera head unit is compensated (gamma correction).



Normally set the GAMMA ON/OFF switch to "ON." If a signal with no gamma correction is required, set the switch to "OFF."

Adjusting the Picture Tone

Use of the GEN LOCK IN connector

Connect a sync signal generator to the GEN LOCK IN connector to supply a sync signal (VBS or BS) to each camera, so that all the cameras are synchronized to this signal.

Subcarrier phase adjustment

- 1** Make a rough adjustment of the subcarrier phase by setting the subcarrier phase switch so that the phase difference between the gen-lock input and video output signals is 0° or 180° .
- 2** To make fine adjustments using the SC phase control. A vectorscope will allow you to make the adjustment easily.

Horizontal phase adjustment

To adjust the horizontal phase, use a screwdriver to turn the H control while observing a waveform monitor or an oscilloscope.

1-9. SPECIFICATIONS

Pickup device

Image device	1/2-inch Interline-transfer CCD, 1-chip
Picture elements	DXC-C1 : 768 x 493 (horizontal/vertical) DXC-C1MDP : 756 x 581 (horizontal/vertical)
Sensing area	6.4 mm x 4.8 mm

Optical system and miscellaneous

Lens mount	C-mount
Signal system	DXC-C1 : EIA standards, NTSC color system DXC-C1MDP : CCIR standards, PAL color
Scanning system	DXC-C1 : 525 lines 2:1 interface DXC-C1MDP : 625 lines 2:1 interface
Scanning frequency	DXC-C1 : horizontal: 15.734kHz vertical: 59.94kHz DXC-C1MDP : horizontal: 15.625kHz vertical: 50kHz
Synchronization	Internal/External
External sync input	VBS : 1Vp-p, 75Ω or BS : 0.3Vp-p, 75Ω
Horizontal resolution	DXC-C1 : 470 TV lines DXC-C1MDP : 460 TV lines
Minimum illumination	4.5 lux (F1.2, GAIN: +12dB, SHUTTER: OFF)
Sensitivity	2000 lux, F5.6
Video output	RGB: 0.7Vp-p, 75Ω VIDEO OUT: 1Vp-p, 75Ω Y: 1Vp-p, 75Ω C: Same level as VBS chroma, 75Ω SYNC: 2.0Vp-p, 75Ω
Video S/N	48dB (GAIN: 0dB, gamma OFF)
White balance	4 modes: AUTO, MANU, 3200K, ATW
Shutter speed	10 settings: OFF, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec., FL, CCD IRIS
Gain	4 settings: AGC. 0dB, 6dB, 12dB

Input and output connectors

Camera head unit	12-pin connector
Camera control unit	TITLE: 8-pin connector
	CAMERA: 12-pin connector
	GENLOCK IN (BNC type)
	RGB OUT (BNC type)
	SYNC OUT (BNC type)
	VIDEO OUT (BNC type)
	Y/C OUT (S)

General

Power requirements	DXC-C1 : 120 V AC, 50/60 Hz DXC-C1MDP : 220-240 V AC, 50/60 Hz
Current consumption	DXC-C1 : 0.22A DXC-C1MDP : 0.16A
Operating temperature	0°C to 40°C (32°F to 104°F)
Transport and storage temperature	-20°C to +60°C (-4°F to +140°F)
Operating humidity	20% to 80% (no condensation allowed)
Transport and storage humidity	20% to 90% (no condensation allowed)

Dimensions

Camera head unit	42 x 42.3 x 44 mm (w/h/d) (1 ¹¹ / ₁₆ x 1 ¹¹ / ₁₆ x 1 ³ / ₄ inches) (Excluding protruding parts)
Camera control unit	220 x 88 x 240 mm (w/h/d) (8 ³ / ₄ x 3 ¹ / ₂ x 9 ¹ / ₂ inches) (Excluding protruding parts)

Mass

Camera head unit	Approx. 105 g (2 oz)
Camera control unit	Approx. 2600 g (5 lbs 7 oz)

Accessories

Power supply cord (1)
Lens mount cap (1)
Waterproof cap (1)
12-pin cable (5m) (1)
Instructions for use (1)
Tripod adaptor (1)
Screws (3)

Optional accessories

12-pin cable CCMC-12P10C (10m)
Title generator TGR-750
Microscope adaptor MVA-12
Coupler MVAC-33-SM/O/N

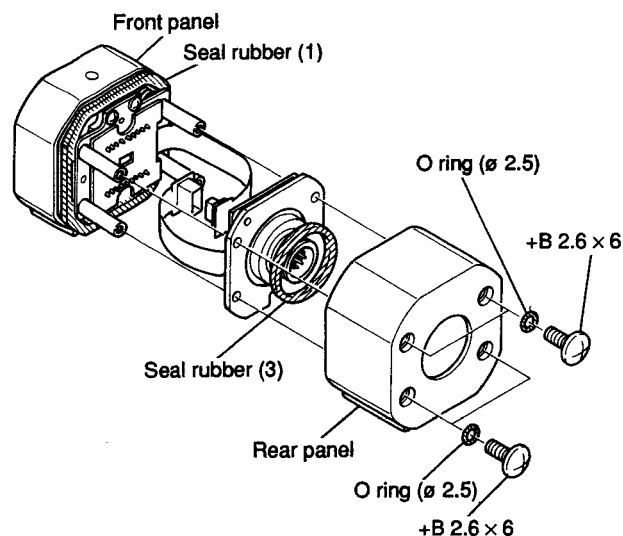
Classification of equipment

- Type of protection against electric shock:
Class I equipment
- Degree of protection against electric shock:
Type B equipment (DXC-C1MDP)
- Degree of protection against harmful ingress of water:
Watertight equipment (Camera head unit)
Ordinary equipment (Camera control unit)
- Degree of safety of application in the presence of a flammable anaesthetic mixture:
Not protected equipment
- Mode of operation:
Continuous operation

SECTION 2

SERVICE INFORMATION

2-1. REMOVAL OF CHU CABINET



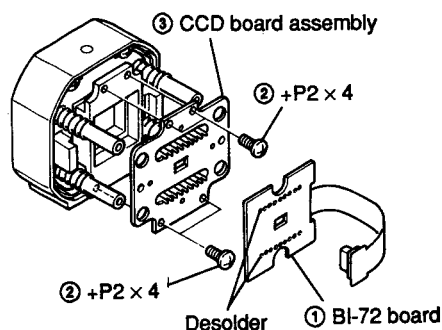
The CHU is water-proof.

When assembling it, change 4 pcs of the O ring (ø 2.5) to a new one.

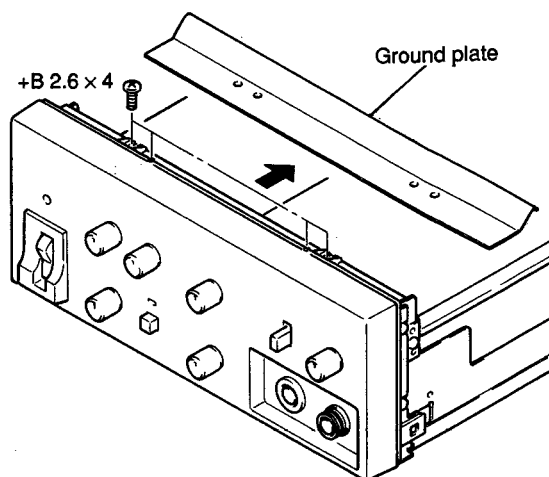
Fit the seal rubber (1) into the groove of the front panel and make sure it is attached properly and not inserted inside.

Use a tightening torque of about 0.5 N·m (5 kg·cm) for the screw (+B 2.6 × 6).

2-2. REMOVAL OF CCD BOARD ASSEMBLY



2-3. OPENING THE PR-181 BOARD



Remove the ground plate.
Attach it again when assembling.

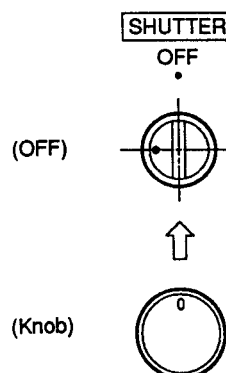
2-4. SETTING THE DIP SWITCHES

☐ : Factory setting

- **PR-181 board**
S1 COMP OFF ↔ ☒ ON
- **TG-126 board**
S1 AGC ☒ AVE ↔ PEAK
S2 GAMMA ☒ ON ↔ OFF

2-5. ATTACHING THE SHUTTER KNOB

Set the SHUTTER switch to OFF and attach the knob so that it points to OFF.



SECTION 3 THEORY OF OPERATION

3-1. BI-72 BOARD

The BI-72 board mounts a IC(CCD imager) that converts a light signal into an electric signal. Photosensors (light-sensitive devices) are arranged on the CCD chip surface. The 811(NTSC)/795(PAL) photosensors are arranged in the horizontal direction, and the 508/596 photosensors in the vertical direction (411, 988/473,820 in total). The total number of effective pixels is 379, 392/437, 664 with 768/752 arranged in the horizontal direction and 494/582 in the vertical direction.

The incident light is converted into electric charges corresponding to the brightness of light using photosensor blocks. The converted electric charges are read from the photosensors to the transfer block, then sequentially transferred to the output block.

The transfer block consists of vertical transfer blocks and a horizontal transfer block. The number of vertical transfer blocks in the vertical direction of the screen is 811/795 as shown in Fig. 1. The number of horizontal transfer blocks in the horizontal direction of the screen (at the top in Fig. 1) is one.

The electric charges that are converted using photosensors are transferred to the vertical transfer blocks adjacent to each photosensor for every field. The electric charges that are transferred to each vertical transfer block are sent in parallel in the vertical direction using vertical transfer clocks V1 through V4 and sequentially transferred to the horizontal transfer block.

The horizontal transfer block transfers the electric charges in the horizontal direction using horizontal transfer clocks H1 and H2 (with a frequency of 910/908 fh), then sends them to the output block.

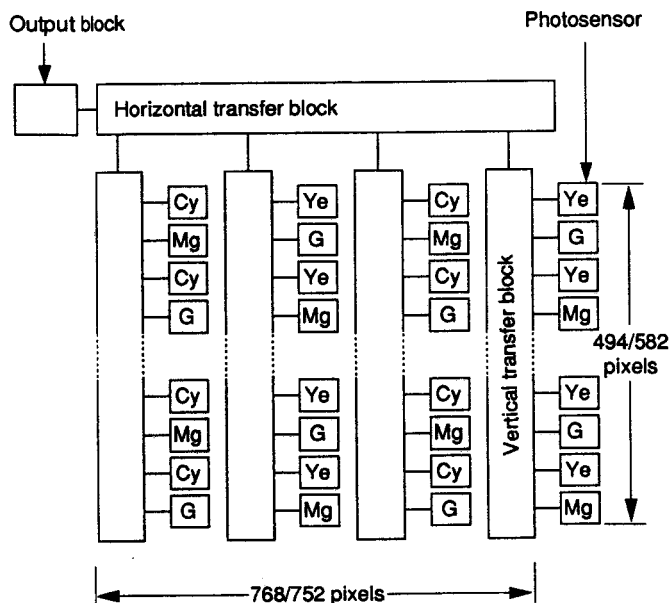


Fig. 1 Internal Structure of CCD

The color coding of a color filter is shown in Fig. 2.

During field read, electric charges are mixed through combination of A1 and A2 in field A and through combination of B in field B, as shown in Fig. 2. For line A1, the electric charges from the horizontal transfer block are thus transferred in the order of (G + Cy), (Mg + Ye), (G + Cy), and (Mg + Ye) signals.

Adjacent Y signals are added and chroma signals are subtracted to produce a Y signal and chroma (color-difference) signal by processing the above signals.

The Y signal employs a proximity signal described below:

$$Y = \{(G + Cy) + (Mg + Ye)\} \times 1/2 = 1/2 \{2B + 3G + 2R\}$$

The chroma (color-difference) signal employs a proximity signal below:

$$R - Y = \{(Mg + Ye) - (G + Cy)\} = \{2R - G\}$$

For line A2, the signal from the horizontal transfer block is output in the order of (Mg + Cy), (G + Ye), (Mg + Cy), and (G + Ye).

Using this signal, the Y signal and C is represented by the following expression:

$$Y = \{(G + Ye) + (Mg + Cy)\} \times 1/2 = 1/2 \{2B + 3G + 2R\}$$

Therefore, lines A2 and A1 is balanced because they are configured identically.

Similarly, the chroma (color-difference) signal is made proximate using the expression below:

$$-(B - Y) = \{(G + Ye) - (Mg + Cy)\} = -\{2B - G\}$$

In the chroma signal, R-Y and -(B-Y) signals can be alternately extracted in linear sequence. Field B is also the same as field A.

The electrical charges in the signals output from the IC1 (CCD imager) are converted into the voltage signal by the capacitor in the output block. The signal is then passed through the buffer Q2 and output to the CCU through the CN823 board and camera cable.

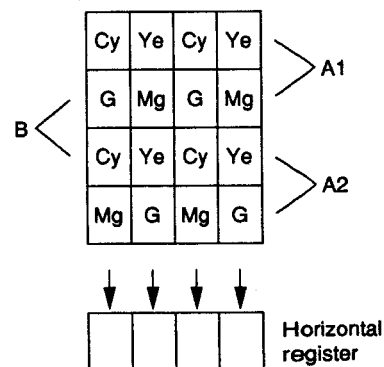


Fig. 2 Color Coding Table

3-2. TG-126 BOARD

The TG-126 board consists of the following:

- (1) Sample and hold/AGC circuits
IC19 (CXA1439M)
IC20 (CXA1390AR)
- (2) Signal processing circuit
IC24 (CXL1517N)
IC25 (CXL5504M)
IC26 (CXA1391R)
Chroma signal matrix circuit Y signal processing circuit
IC19 (CXA1439M) and IC20(CXA1390AR)
- (3) CCD drive timing signal generator circuit
IC9 (CXD1252AR)
- (4) CCD vertical transfer clock drive circuit
IC1 (CXD1250N)
- (5) Sync/external sync signal generator circuits
IC35 (CXD1217Q)
IC34 (CXD1216M)
- (6) External sync H/SC phase adjustment circuit
- (7) V sub-voltage supply/shutter control circuits
- (8) Iris/AGC detector circuits
- (9) 1820Hz oscillator circuit
- (10) CHU cabl compensation
IC8(CX23065A)

(1) Sample and hold/AGC circuits

The signal from the CCD imager on the BI-72 board is output to the CCU through the CHU cable and received by the buffer Q8. And these signals are sampled and held in their timings for signal separation.

The DATA and PG signal input to IC19 are sampled and held by the SHP and SHD pulse obtained by converting the XHSP and XSHD sample hold pulses using IC18. The PG signal is sampled and held twice in the order of SHP and SHD and the DATA signal once by SHD. The difference between the two signals is extracted for signal separation. The separated signal is input to the AGC amplifier and detected by the detector circuit incorporated outside IC20 so that its proper value is maintained. (In the AGC mode) The signal will be branched into the S1 and B2 signals by the XSP1 and XSP2 sample and hold pulses.

(2) Signal processing circuit

Chroma signal matrix circuit

1) C0 and Y0 signal separation

The C0 signal ($2R - G$ or $G - 2R$) and Y0 signal ($2R + 3G + 2B$) are separated from an S1 signal ($G + Cy$ or $Mg + Cy$) and S2 signal ($Mg + Ye$ or $G + Ye$).

These signals are used for R, G, and B signal matrixing.

- The C0 signal is produced by subtracting the S1 signal from the S2 signal.

In a ($G + Cy$) / ($Mg + Ye$) line,

$$\begin{aligned} C0 &= (Mg + Ye) - (G + Cy) \\ &= (R + B + R + G) - (G + G + B) \\ &= 2R - G \end{aligned}$$

In a ($Mg + Cy$) / ($G + Ye$) line,

$$\begin{aligned} C0 &= (G + Ye) - (Mg + Cy) \\ &= (G + R + G) - (R + B + G + B) \\ &= -(2B - G) \end{aligned}$$

Therefore, $2R - G$ and $G - 2B$ signals are alternately obtained in linear sequence.

- The Y0 signal is produced by adding the S2 and S1 signals.

In any line,

$$\begin{aligned} Y0 &= (Mg + ye) + (G + Cy) \\ &= (R + B + R + G + G + B) \\ &= 2R + 3G + 2B \end{aligned}$$

The C0 and Y0 signals are thus balanced because they are configured identically.

2) C1 signal creating circuit

The C0 signal is a linear sequence signal of $2R - G$ (CR) and $-(2B - G)$ (CB) signals. CR and CB signals are simultaneously required to matrix and produce R, G, and B signals. Therefore, this signal is produced by producing 1H-delayed signal C1 and by adding the C0 and C1 signals to it.

The C0 signal is output in reverse polarity from pin ④ of IC26. The resultant signal is input to pin ② of IC24 and 1H-delayed using a CCD delay line to produce the C1 signal. The drive clock of the CCD 1H-delay line is XDL1 and XDL2, and its frequency is 455fsc (7.16 MHz). The C0 signal thus has a sufficient sampling frequency for a chroma signal.

The C1 signal is output in reverse polarity from pin ⑩ of IC24. The signal is then input through buffer Q17 to pin ④ of IC26 and output through a gain control amplifier to the RGB matrix circuit. In the gain control circuit, the C1 signal level is set so that it is equal to the C0 signal level using the voltage at pin ④ of IC26.

3) Y1 and Y2 signal creating circuit

Y0, Y1, and Y2 signals are required to produce a V aperture signal.

The Y0 and Y1 signals are used as a Y signal for R, G, and B signal matrixing. The Y0 signal is output in positive polarity from pin ② of IC26. The signal is then input to pin ③ of IC24 and 1H-delayed using a CCD 1H delay line to produce the Y1 signal. The drive clock frequency of the CCD 1H delay line is 455 fh (7.16 MHz). The Y0 signal has thus a sufficient sampling frequency for a Y signal that is used for R, G, and B signal matrixing or a V aperture signal.

The Y1 signal is output in reverse polarity from pin ⑪ of IC24. The signal is then input through buffer Q19 to the pin ⑤ of IC26 and passed through the gain control amplifier. The resultant signal is added to the Y0 signal and output to the matrix circuit.

In the gain control circuit, the Y1 signal level is set so that it is equal to the Y0 signal level using the voltage at pin ⑤ of IC26. The Y2 signal is also produced by delaying the Y1 signal by 1H still more.

4) RGB matrix circuit

The R, G, and B signals are produced from C0, C1, and $Y0 + Y1$ signals to process a primary color signal.

- Two continuous signals CR and CB are produced from C0 and C1 signals (linear sequence signals of CR and CB signals).

When C1 signal is CR signal:

The CB signal is used as the C0 signal. The CR (C1) and CB (C0) signals become one by adding the C1 and C0 signals.

When C1 signal is CB signal:

The CR signal is used as the C0 signal. The CB (C1) and CR (C0) signals become one by adding the C1 and C0 signals.

- Y signal used for R, G, and B signal matrixing is produced by adding Y0 and Y1 signals.
- The R, G, and B signals are produced from CR, CB, and Y signals.

R signal:

$$R = CR + \alpha \cdot Y$$

where, value α is set using the voltage at a pin ④ of IC26.

B signal:

$$B = -CB + \beta \cdot (Y - CR)$$

where, value β is set using the voltage at a pin ④ of IC26.

G signal:

$$G = Y - CR + CB$$

5) White balance circuit

The produced R, G, and B signals are processed using the white balance circuit so that they are white-balanced with respect to the color temperature of the subject that a camera shoots.

The R and B signals are first input to variable gain amplifiers, and the G signal is input to a fixed gain amplifier. The gain of the variable gain amplifiers is set to the white balance in the 3200K mode (at color temperature of 3200K) using the voltage (R GAIN) at pin ③ of IC26 and voltage (B GAIN) at pin ④.

The R and B signals are then input to second-stage variable gain amplifiers, and the G signal is input to a second-stage fixed gain amplifier. The second-stage variable gain amplifiers are controlled using the voltage (R CONT) at pin ③ of IC26 and the voltage (B CONT) at pin ④. These voltages are output from IC55 on the PR-181 board by controlling a microcomputer.

6) γ compensator circuit

R, G, and B signals are processing using the γ compensator circuit and sent to the color-difference matrix circuit in the next stage.

7) Color-difference matrix circuit

Color-difference signals must be produced to produce an NTSC color signal. The color-difference matrix circuit also adjusts the color reproduction. The color-difference matrix circuit produces the color-difference signals in accordance with the expression below.

$$R - Y = 0.7 (R - G) - 0.11 (B - G)$$

$$B - Y = 0.3 (R - G) - 0.89 (B - G)$$

Hue compensation signals $R - Y$ HUE and $B - Y$ HUE are added to color-difference signals $R - Y$ and $B - Y$. The resultant signals are output to pins ⑳ and ㉑ of IC26.

Y signal processing circuit

The Y_H signal output from IC20 is input through low-pass filter FL1 and delay line FL2 to pin ㉒ of IC26.

1) γ compensator circuit

The Y_H signal is processed using the γ compensator circuit and sent to the Y_H signal 1H-delay circuit in the next stage.

2) Y_H signal 1H-delay circuit

The Y_H signal 1H-delay circuit primarily consisting of IC25 is inserted to compensate for the delay in a chroma signal channel relative to the Y_H signal. The H aperture Y signal passed through a comb filter is produced using a 1H-delayed Y_H signal. The Y_H signal output from pin ④ of IC26 is input to pin ① of IC25. The signal is then passed through a CCD delay line and sent to external low-pass filter FL3 (230 nsec delay line) so that it is delayed by 1H. The CCD delay line drive clock frequency is 910 fH.

3) Y_H signal gain adjustment circuit

The Y_H signal is input again to pin ② of IC26. The gain that is attenuated using a Y_H signal 1H-delay circuit is compensated using the gain adjustment circuit. The input signal at pin 2 is output from pin ⑤.

(3) CCD drive timing signal generator circuit

IC9 generates a clock, sample and hold pulse, and clamp pulse required for driving the CCD by inputting the horizontal drive (HD) and vertical drive (VD) pulses output from a 1820fH oscillator circuit and sync signal generator circuit. The pulses described below are also output.

- CL : 910fH clock
- H1 and H2 : CCD imager H register drive pulse
- LH1 : CCD imager H register final-stage drive pulse
- XV1 to XV4, and XSG1 and XSG2 : CCD imager V register drive pulse.
- PG : Pre-charge gate pulse
- CLP1 to 4 : Various clamp pulses
- XSHP and XSHD : Sample and hold pulse for signal separation
- XSP1 and XSP2 : Sample and hold pulse for color separation
- XSH1 and XSH2 : Sample and hold pulse for Y signal recomposition
- XDL1 and XDL2 : CCD 1H delay drive pulse for chroma signal

The pulse above will be output. The X SUB electric sweep pulse used for controlling the electronic shutter is generated from the electronic shutter/CCD IRIS circuit of the PR-181 board. The pulses generated in IC9 will be selected and switched as follows by IC11 and IC17.

SHUTTER Mode	Selected by IC11
CCD-IRIS	Generated in the PR-181 board
Others	Generated in IC9

(4) CCD vertical transfer clock driver

The CCD vertical transfer clock driver drives the CCD imager V register driving pulse. It drives the XV1 to XV4 and XSG1 and XSG2 output from IC9. These pulses are then passed through the CHU cable and sent to the BI-72 board. The X SUB electric sweep pulse is also driven by this IC.

(5) Sync/external sync signal generator circuits

IC34 and IC35 generate various timing signals required to produce an NTSC video signal when a CL (910fH) clock is input. The timing signals are as follows:

- SYNC : Composite sync signal
- BLK : Blanking signal
- HD and VD : Horizontal and vertical sync signals
- FLD : Field signal
- BF : Burst flag signal
- INT/EXT : Sync mode selection signal.
Internal sync mode: Low
External sync mode: High
- H COMP OUT : 1820fH oscillator circuit control voltage output

(6) External sync horizontal phase adjustment

IC33 adjusts the horizontal phase while IC36 adjusts the SC phase during external sync operations. The adjusting controls are all on the CN-824 board and can be controlled by the user.

(7) V SUB voltage supply/shutter control circuits

1) V SUB voltage supply circuit

The V SUB voltage supply circuit primarily consisting of Q1 is used to supply a specified voltage to the CCD imager overflow drain. Q1 and Q2 are a regulator with the V SUB control voltage as reference voltage.

The V SUB control voltage using RV1 and is set so that the CCD imager overflow drain voltage (at pin ④ of V SUB) is the same as the specified voltage. This voltage value is displayed on the back of the CCD imager using a code.

2) Shutter control circuit

The shutter control circuit controls the electronic accumulation time by superimposing the electric charge sweep pulse on the overflow drain DC bias (V SUB) of the CCD imager. This pulse which corresponds to the speed of the shutter is generated by IC9 and the PR-181 board. (The period in which the electric charge sweep pulse is not output is defined as the time of exposure and corresponds to the speed of the shutter. This pulse will not be output in normal modes.)

The XSUB electric charge sweep pulse is reversed and amplified by IC1, superimposed to the V SUB DC voltage, passed through the CHU cable, and input to Pin ④ of the CCD imager.

(8) IRIS/AGC detector circuits

The CCD iris detector circuit primarily consists of Q13. The AGC detector circuit primarily consists of Q11. This circuit establishes an AGC loop together with an operational amplifier in IC20.

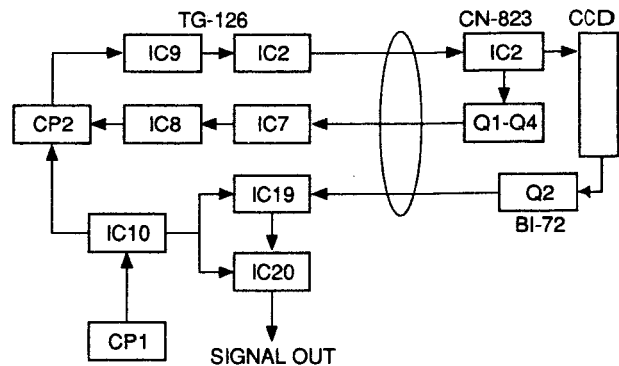
(9) 1820 fH oscillation circuit

CP1 and CP2 are voltage control type 1820 fH oscillation circuits using crystal.

They use two crystal modules which have stable oscillation frequencies and are temperature compensated. They carry out the CHU cable phase compensation described in the following.

(10) CHU cable phase compensation

To compensate changes in the phases of the CCD output signals and sample hold pulses when the length of the CHU cable is changed, IC10 generates sample hold pulses whose phases have been compensated and IC19 and IC20 carry out signal processing. The compensation loop is shown below.



3-3. PR-181 board

The PR-181 board consists of the following blocks.

- (1) Color difference signal compensation circuit
IC2 (CXA1609N)
- (2) Color difference signal cleaning circuit
IC3, IC4 (CXA1157M)
- (3) Encoder circuit
IC12 (CXA22017)
IC18 (CXA1392R)
Chroma signal encoder circuit
Y signal encoder circuit
- (4) Chroma signal comb filter circuit
IC15 (CXL5504M)
- (5) Title insertion circuit
- (6) RGB signal processing circuit
IC22 to IC24
(CXL5504M)
IC34, IC37, IC40
(CXA1392R)
Vertical correlation processing circuit
Y High-mix circuit
Signal processing circuit
- (7) Color bar signal generation circuit
- (8) White balance/CCD-IRIS
Control circuit
IC51 (SC406684FU)
IC53 (CXD8822Q)

(1) Color difference signal compensation circuit

To improve the reproducibility of the green signal, IC2 focuses on the green components of the R – Y and B – Y color difference signals and carries out color difference signal compensation. This function can be canceled by turning off the slide switch S1.

RV1 is used to adjust the level of the green components at this time.

(2) Color difference cleaning circuit

To remove the noise of the BLK portion of the color difference signals output from IC2, they are BLK cleaned by IC3 and IC4 and then sent to the chroma encoder circuit.

(3) Encoder circuit

Chroma signal encoder circuit

The encoder circuit is used to encode R – Y and B – Y color-difference signals into an NTSC chroma signal. The R – Y signal is balanced and modulated using a +90° phase 3.58 MHz carrier, with the burst added. The B – Y signal is balanced and modulated using a 0° phase 3.58 MHz carrier, with the burst added.

The modulated R–Y and B–Y signals are added to produce a cross modulation wave and are output from pin ⑥ of IC12. The signals are then passed through a chroma comb filter circuit block primarily consisting of IC15, sent to the external 3.58 MHz bandpass filter, then input again to pin ⑩ of IC18. The resultant signals are mixed with a luminance signal and output from pin ⑫ as a composite video signal.

Y Signal encoder circuit

1) Aperture compensator circuit

The aperture compensator circuit emphasizes the contour of a video signal and improves the resolution visually. The vertical lines on the screen are emphasized using an H aperture signal, and the horizontal lines on the screen using a V aperture signal.

The H and V aperture compensation signals are added to the Y_H signal that is input to pin ④ of IC18. The resultant signal is output to the next stage.

The H aperture compensation signal is produced using delay line FL6. Delay line FL6 employs a 70 nsec group delay similarly to FL5. The H aperture compensation signal is level adjusted using a pin ③ of voltage, noise sliced, and added to this signal. The noise slice level is also set using the voltage at pin ③.

The V aperture signal is produced using IC26 on the TG-126 board and input through Y signal phase adjustment delay line FL4 and a camera ID mixing circuit to IC18. The signal is then added to a Y signal.

2) Y gain circuit

The Y gain circuit sets the Y signal output level of a camera to the specified value. The output level is adjusted using RV11.

3) White clip circuit

The white clip circuit limits the Y signal peak value of a camera. The peak value is preset using RV13.

4) Setup circuit

The setup circuit sets the Y signal black level of a camera to the specified value. The black level is adjusted using RV12.

5) Sync signal adder circuit

A sync signal is added to the Y signal of a camera using the sync signal adder circuit and mixed with a chroma signal in the later stage. The mixed signal is output from pin ② as a composite video signal.

(4) Chroma signal comb filter circuit

The chroma signal comb filter circuit primarily consists of IC15. This circuit eliminates the crosstalk components contained in a Y signal from the chroma signal.

(5) Title insertion circuit

By connecting the title generator, title characters can be inserted in the VBS signal, Y/C separate signal, and RGB signal.

For the VBS signal and Y/C separate signal, title characters will be inserted in the Y signal by Q26 and IC18 and in the color difference signals by Q5, Q6, IC6, IC7, and IC8.

For the RGB signal, title characters will be inserted in each signal by IC34, IC37, and IC40.

(6) RGB signal processing circuit

1) Vertical correlation processing circuit

The signals (R/G/B DET) output from IC26 on the TG-126 board contain aliasing noise components in the vertical direction which will add unwanted colors to the boundaries between the colors.

To reduce these components, the signals are delayed by 1H by the CCD delay lines-IC22, IC23, and IC24-and added with the 0H signal.

Principally, the R/G/B DET signals are to be used as signals for detecting white balance. In this unit, they are also used as RGB video signals. The main reason is because applying a +5V power supply voltage to pin ① of IC26 of the TG-126 board, or opening it, allows the gamma to be turned on and off.

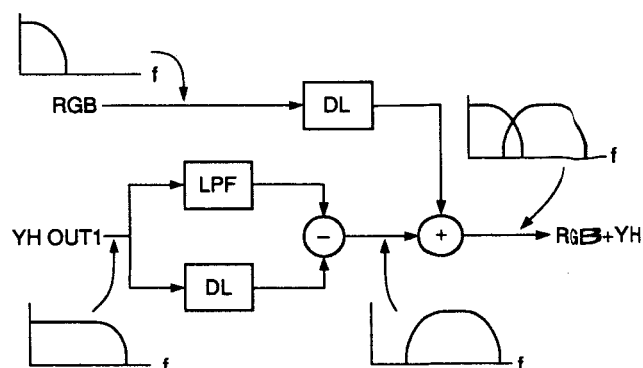
As this signal basically also contains low range components, high range components are added to it with the following method.

2) Y high-mix circuit

The YOUT1 signal used in the VBS contains high band components of up to approximately 6 MHz. This signal is branched by the Q3 output and input to the following two circuits.

One of the circuits is the approximately 1 MHz (similar band as the RGB low band signal) active low pass filter consisting of Q28 and Q32, and the other is the wide band filter which has the same delay amount as the low pass filter. The signals output from these two filters are passed through the subtraction circuit consisting of Q29, to obtain their difference which is used as the YH signal without low band components.

This YH signal is added to the delayed R, G, and B low band signals to obtain the required signal. Q59 to Q64 serve as the addition circuits. They also add the V aperture compensation signal, other than the signals that have been mentioned, for emphasizing the vertical direction borderlines.



3) Signal processing circuit

To blank the RGB signals, add the setup, and impose the white clip, IC34, IC37, and IC40 carry out signal processing individually.

The following describes the above process for the G signal. After the G signal is added with the YH signal and V aperture compensation signal by Q63 and Q64, it is input to Pin (40) of IC37. The H aperture compensation signal will then be added by FL12. The level of the G signal will, however, then be adjusted by the Pin (36) voltage and added to the main signal that has been noise sliced.

Next, the G signal is passed through the G gain circuit, setup circuit, white clip circuit, and sent to the circuit adding the sync signal.

The circuit adding the sync signal will add the sync signal to the G signal of the camera, which will then be output from Pin (22), and sent to the CN-824 board in the next stage.

The sync signal added to the G signal can be set so that it is not added by the "G ON SYNC" switch of the rear panel.

In this unit, only the gamma of the RGB signals can be switched by turning on/off the "GAMMA" switch on the rear panel. This basic operation is based on the switching of the IC26 internal circuit by applying +5V power supply voltage to Pin (31) of IC26 on the TG-126 board, or by opening the pin, and allows the switching of the output signals of Pins (28), (29), and (30) to pre-gamma processing signal or to post-gamma processing signal. IC38 and IC39 switch the controls for adjusting the gains at this time.

(7) Color bar signal generation circuit

The color bar signal generation circuit starts operating when the "MODE" switch on the front panel is set to "BARS" and the voltage input to Pin (10) of IC44 becomes 0V. When the BLK pulse input to IC44 becomes the H level, IC44 starts oscillating and supplies the clock pulse to IC45. At the same time, C191 and R370 differentiate the BLK pulse and supplies it to Pin (11) of IC45 so that the outputs of IC45 are counted from 0.

Two-divided B signal, four-divided R signal, and eight-divided G signal from the counter IC45 are inverted by IC46 and their voltages are lowered to approximately 1 Vpp by the resistor. The outputs of the buffer from Q48 and Q49 in the next stage are clamped by IC28 and branched by the output of buffers Q51, Q52, and Q53.

The outputs to the RGB system are switched by IC32. The outputs to the VBS system are passed through the matrix circuit for the Y, color difference signal consisting of buffers Q65 to Q73 and processed, and then sent to the each Y and chroma encoder.

(8) White balance/CCD-IRIS control circuit

1) White balance control circuit

The white balance detection signals sent from Pins (28), (29), and (30) of IC26 on the TG-126 board are first clamped at IC21, and peak detected by D5, C205, C206, and C207. High luminance components are removed by IC47 using the pulse made by converting the chroma suppress signal to the CMOS level.

The size of the R and B detection signals is compared to that of the G signal by the comparator IC49 and the results are input to the microcomputer IC51. The white balance mode at this time is determined according to the state of the key matrix consisting of Pins (20) to (32) of IC51. The voltage for white balance is made the digital serial data by Pin (5) of IC51, sent to the electronic control IC55 here it is digital/analog converted and made into the DC control voltage.

2) CCD-IRIS control circuit

The CCD-IRIS function changes the number of electronic shutter pulses to be generated freely and controls the CCD imager accumulation time to maintain the consistency of the CCD output signal. Compared to conventional methods of controlling the iris, it is a true electronic control method.

Signals output from Pin (17) of IC20 on the TG-126 board are first made average by Q13, then amplified by IC21, sent to the PR-181 board, and input to Pin (9) of the comparator IC49. In the same way, DC voltages generated by IC55 are supplied to Pin (8) and the results are input to Pin (38) of the microcomputer IC51.

The results of the calculation by IC51 are made into the digital/serial data and sent to Pin (1) of IC53 to control the number of the XSUB electronic shutter pulse generation inside.

3-4. CN-824 BOARD

This board consists of the following circuit blocks.

- (1) Video driver circuit
- (2) Sync signal driver circuit

(1) Video driver circuit

The video driver circuit is for the six channels for the VBS signal, Y/C separate signal, and RGB signals. The channels consist of discrete parts. The circuit operates on a + -5V power supply.

(2) Sync signal driver circuit

The sync signal driver circuit has a complementary structure and receives the sync signals through the emitter follower. Like the video driver circuit, it also operates on a + -5V power supply.

3-5. PS-308 BOARD

The PS-308 board consists of the following circuit blocks.

- (1) Power supply fuse circuit
- (2) DC-DC converter circuit

(1) Power supply fuse circuit

The power supply fuse circuit is for the primary side of the AC power supply. It is inserted with two fuses-F1 and F2.

(2) DC-DC converter circuit

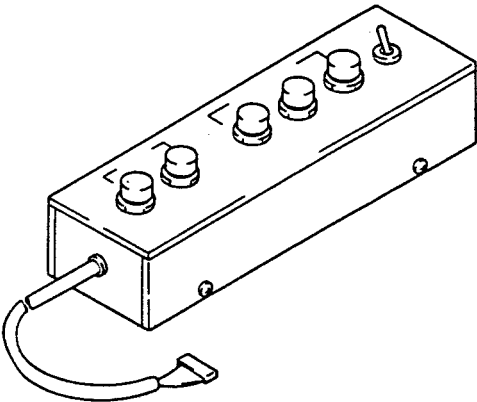
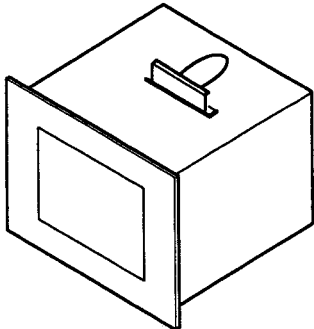
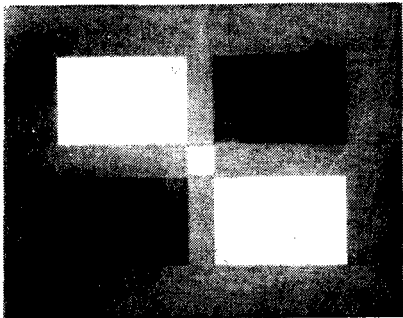
The DC-DC converter circuit has a DC-DC converter which operates on a 12V input voltage. It has the following output systems.

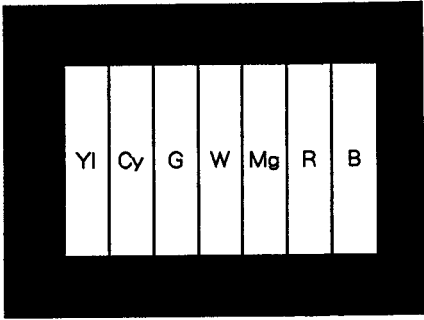
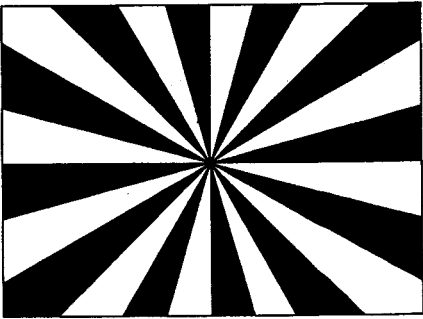
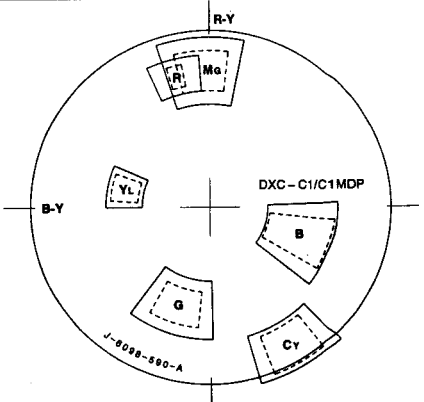
- +15V : Used mainly for the power supply of the CCD imager. Also used for driving the electronic shutter pulse.
- +9V : Used mainly for the chroma encoder.
- +5V : Divided into two components to be used for digital and analog circuits.
- 5V : Used mainly for analog circuits.

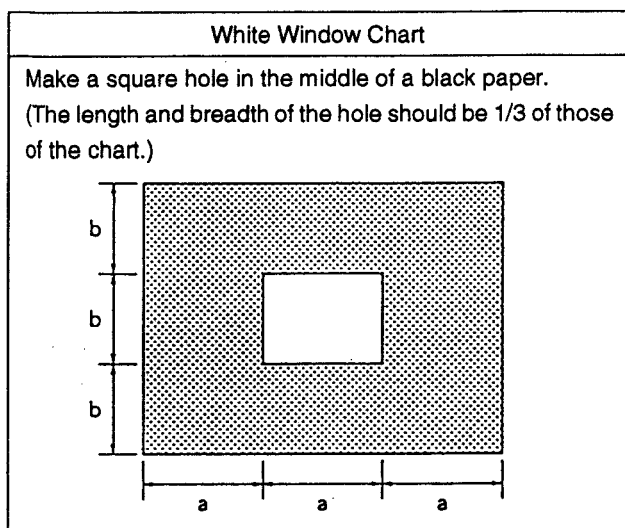
SECTION 4
ALIGNMENT

4-1. PREPARATION

4-1-1. Fixtures and Equipment

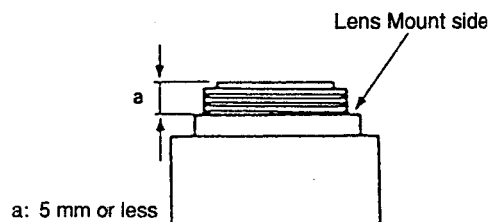
J-6095-690-A	EVR Adjustment Fixture
	
J-6029-140-A	Pattern Box PTB-500
• Light source for test charts 	
A-6026-130-A	Grayscale Chart
• For video level and gamma adjustment, etc. 	

J-6020-250-A	Color Bar Chart
• For color adjustment 	
J-6024-340-B	Siemens Star Chart
• For back focus adjustment 	
J-6098-590-A	Vectorscope Scale
 ※ Supplied with this service manual.	



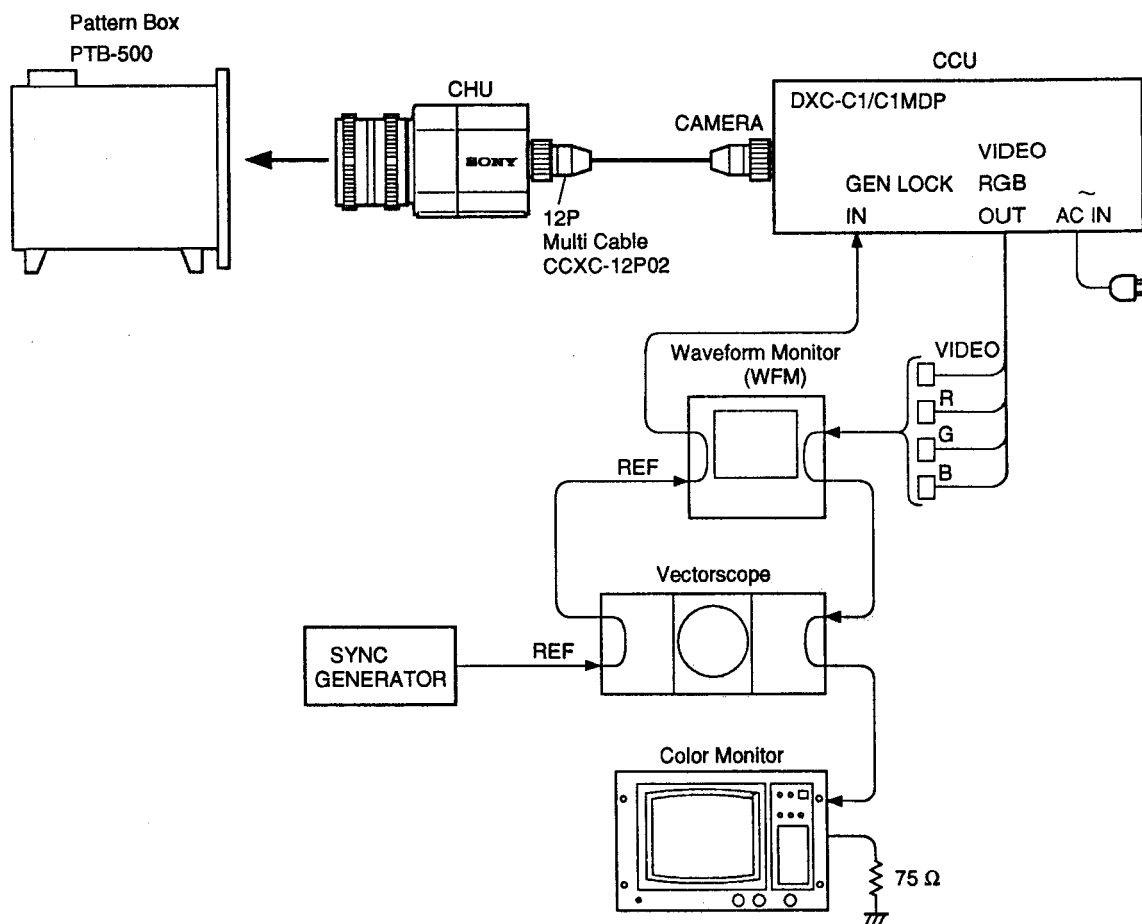
Commercial measuring equipment and fixture

- Dual Trace Oscilloscope
- Vectorscope
- Waveform Monitor (WFM)
- Frequency Counter
- Digital Voltmeter
- Colour Monitor
- Lens (C mount and manual iris type)



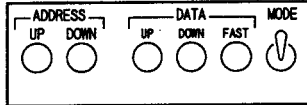
NOTE: The lens must not project more than 5 mm from the lens or other optical equipment.

4-1-2. Connection



4-1-3. EVR (Electronic volume) Adjustment Fixture

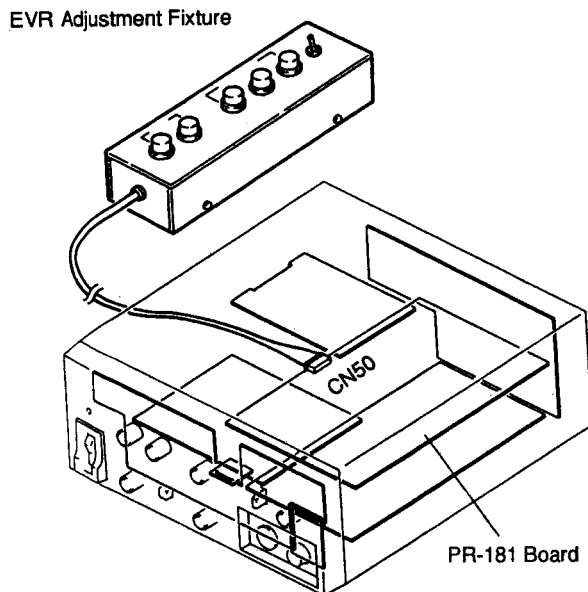
Use a special fixture for the EVR adjustment. The methods are as follows.



1. Preparation

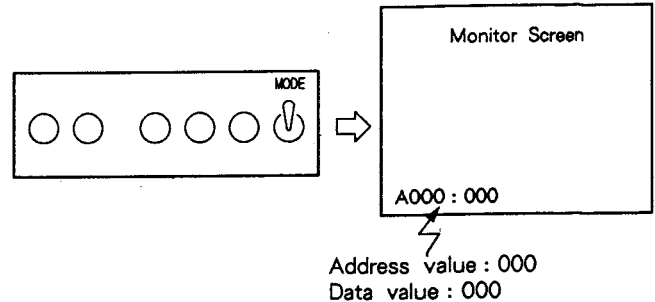
First, connect the equipment according to the connection diagram in 4-1-2.

Next, connect the connector of the EVR adjusting fixture to the CN50 connector of the PR-181 board of CCU, and then turn ON the power of the camera.



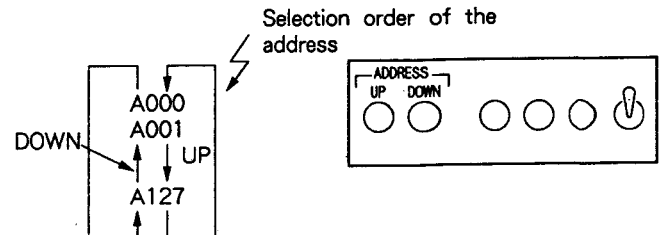
2. EVR adjustment mode

Set the mode switch to the adjustment mode, and the EVR address and data are shown in the monitor.



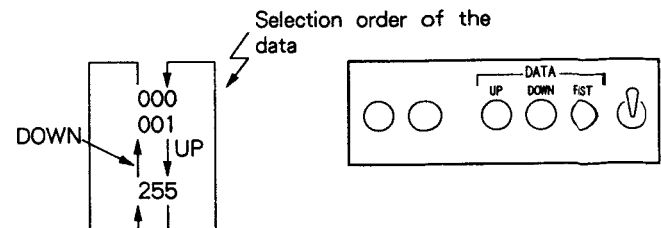
3. EVR address selection

The address (value) on the monitor can be changed by pressing the address switch (UP, DOWN) on the fixture. It changes more quickly when keep pressing.



4. EVR data selection (EVR adjustment)

The data (adjustment value) can be changed by pressing the data switch (UP, DOWN) on the fixture. (In turning the general VR, the level of the signal changes in the same manner.)



<Rough adjustment>

Quick rough adjustment is possible by pressing the **data** switch (UP or DOWN) and the **FAST** switch at the same time. The data changes by 8 steps.

5. Write down the data on the memory (Adjustment completion)

Press the address switch (UP or DOWN) to change the address value. Then the new data set by the data switch is written down on the memory for the first time, and the adjustment is completed.

Note: If the adjustment mode is cancelled or the power is set to OFF without pressing the address switch, the new data cannot be written but the old one remains as it is.

4-1-4. Settings before Adjustments

(a) Switch

Set the switches of the camera as follows.

• CCU Front Panel

WHITE BALANCE 3200
R (Center)
B (Center)
GAIN 0
SHUTTER OFF
MODE CAM
DETAIL (Center)

• CCU Rear Panel

RGB GAMMA ON
PHASE 0
G SYNC ON

• TG-126 Board

S1 (AGC DET) AVE (3)
S2 (Y GAM) ON

• PR-181 Board

S1 (G COMP) ON

(b) EVR (Electronic Volume) Adjusting Fixture

Refer to section 4-1-3 and preset the data of the following addresses as shown using the electronic volume.

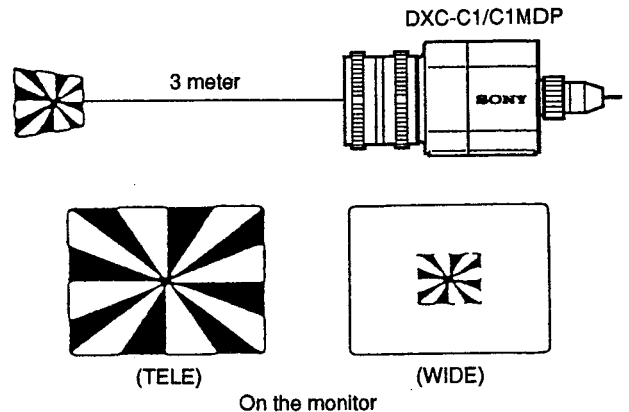
ADDRESS	DATA
A001	000
A014	000
A015	000

4-1-5. Flange Back Adjustment

When the zoom lens is used, the subject may not be in focus for TELE and WIDE. In such cases, adjust the flange back (distance between the lens and subject). Once adjusted, it need not be adjusted again until the lens is changed.

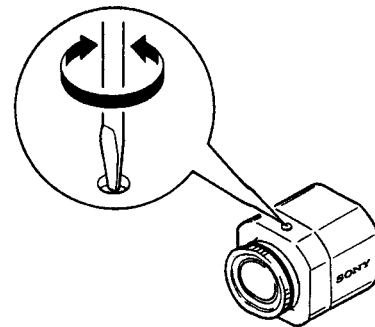
Subject: Siemens star chart

Lens iris: Open



Adjustment:

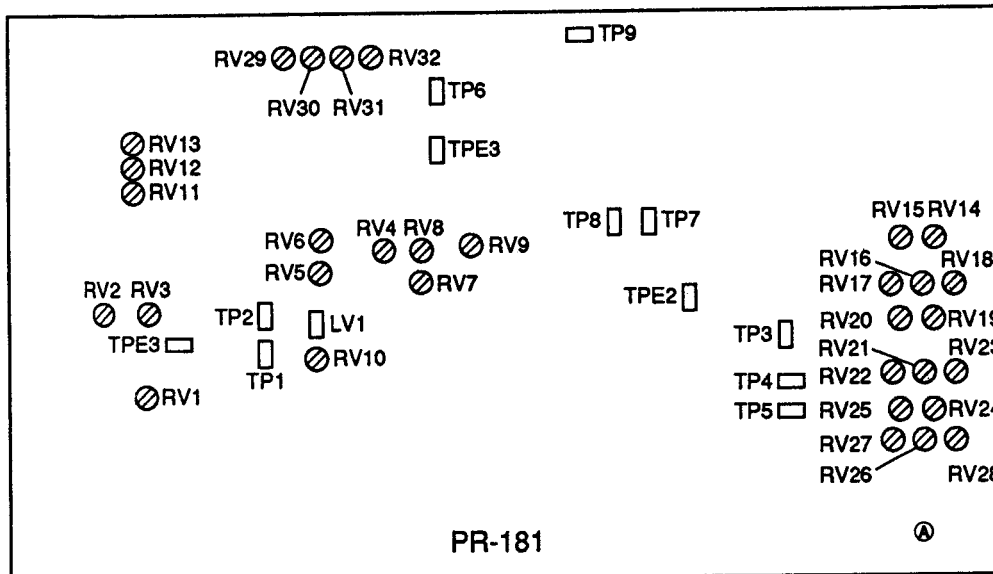
1. Open the iris, expose the subject (Siemens star chart) from a distance of 3 mm, and display it on the monitor.
2. Adjust the lens to TELE.
3. While observing the monitor, rotate the distance ring of the lens and focus on the subject.
4. Adjust the lens to WIDE.
5. Rotate the flange back adjusting screw of the camera, and focus on the subject as in step 3. Do not move the distance ring of the lens at this time.



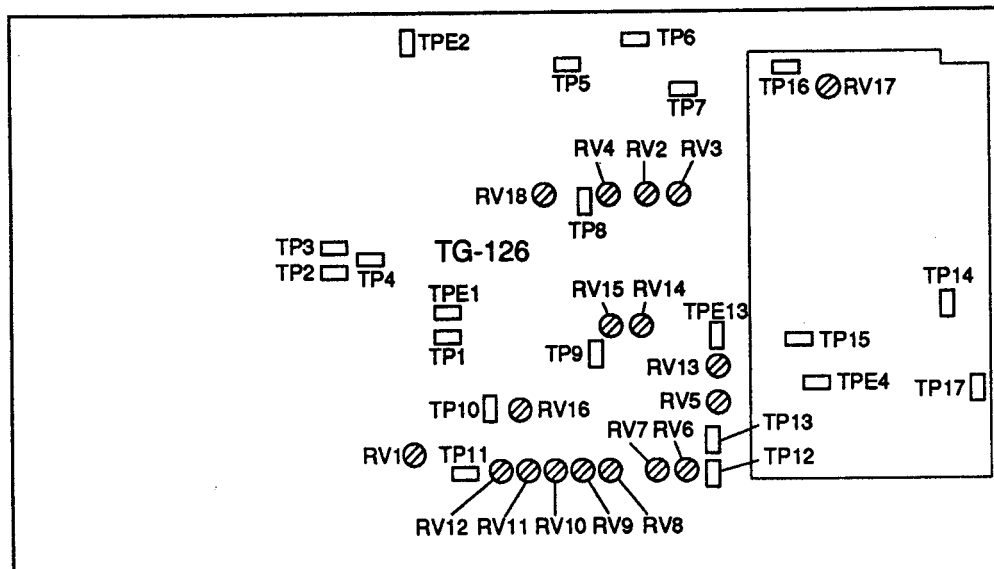
6. Repeat steps 2 to 5 until the subject is in focus for both TELE and WIDE.

4-2. ADJUSTMENTS

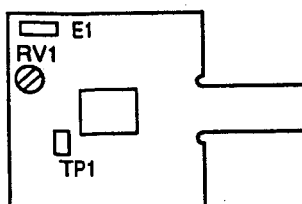
[Adjusting Points]



PR-181 BOARD (A SIDE)



TG-126 BOARD (A SIDE)



BI-72 BOARD (A SIDE)

DXC-C1(UC)
DXC-C1MDP(EK)

4-2-1. FSC Adjustment

Measuring Equipment: Frequency counter
 Measuring Point: TP15 (GND:E4)/TG-126 board
 Adjusting Point: ●RV17/TG-126 board
 Specification: NTSC: $3,579,545 \pm 10$ Hz
 PAL: $4,433,619 \pm 10$ Hz
 Adjusting Method: Remove the cable of the GEN LOCK IN terminal and adjust it. After adjusting, connect the cable again.

4-2-2. V PGL, V SUB Voltage Adjustment

• V PGL, V SUB Setting Values

According to the set values of the CCD image element, this adjustment should be made.

The values to be set are displayed in two-digit codes at the back of each CCD image element.

This code is also labeled on the shield case inside the CCU.

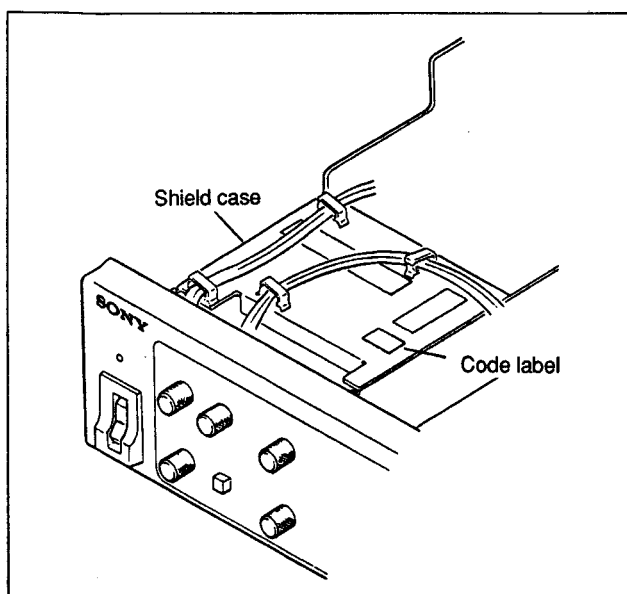
If the CCD image element has not been replaced, refer to the code labeled at the shield case inside the CCU and adjust.

If it has been replaced, be sure to correct this code labeled to the code displayed at the back of the new CCD image element.

Code ... 2-digit display: ☐☐

↑↑

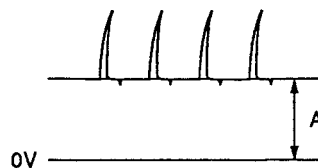
V PGL code V SUB code



1) VPGL Adjustment

Measuring Equipment: Oscilloscope (0.2 μ s/div)
 Measuring Point: TP1 (GND:E1)/BI-72 board
 Adjusting Point: ●RV1/BI-72 board
 Specification: Setting value ± 0.1 V
 Adjusting Method: Adjust ●RV1 so that the A of the TP1 waveform becomes the PGL value. Codes and values actually set correspond as follows.

V PGL Code	1	2	3	4	5	6	7
Actual Value Set	1.0	1.5	2.0	2.5	3.0	3.5	4.0



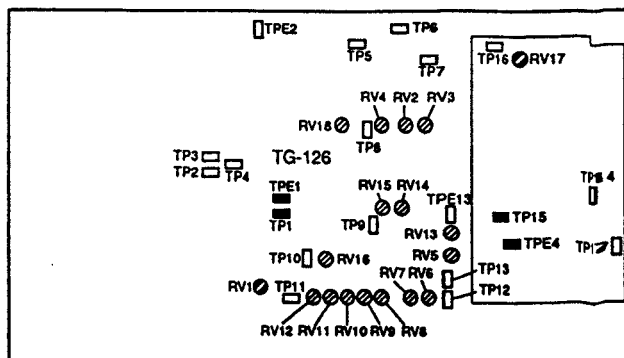
2) V SUB Voltage Adjustment

Measuring Equipment: Digital voltmeter
 Measuring Point: TP1 (GND:E1)/TG-126 board
 Adjusting Point: ●RV1/TG-126 board
 Specification: Setting value ± 0.2 V
 Adjusting Method: Codes and values actually set correspond as follows.

V Sub Code	E	f	G	h	J	K	L
Actual Value Set	9.0	9.5	10.0	10.5	11.0	11.5	12.0

m	N	P	Q	R	S	T
12.5	13.0	13.5	14.0	14.5	15.0	15.5

U	V	W	X	Y	Z
16.0	16.5	17.0	17.5	18.0	18.5



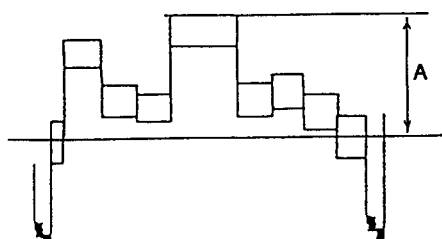
TG-126 BOARD (A SIDE)

DXC-C1(UC)
 DXC-C1MDP(EK)

4-2-3. CDS Output Level Adjustment

Object: Colorbar chart
 Measuring Equipment: Oscilloscope (10 μ s/div)
 Trigger: TP2 (HD), (GND:E1)/TG-126 board
 Measuring Point: TP6 (GND:E2)/TG-126 board
 Adjusting Point: Iris control
 Specification: $A=150 \pm 10$ mV
 Adjusting Method:

- 1) Adjust the zoom control so that the chart frame matches the underscanned picture frame.
- 2) Adjust the iris control so that the white level of TP6 becomes the specified value.



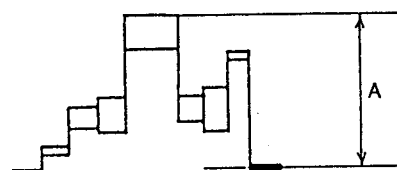
4-2-4. Gain Adjustment

Object: Colorbar chart
 Measuring Equipment: Oscilloscope (10 μ s/div)
 Measuring Point: TP8 (GND:E2)/TG-126 board
 Adjusting Point: $\odot$ RV2/TG-126 board (0 dB)
 $\odot$ RV3/TG-126 board (+6 dB)
 $\odot$ RV4/TG-126 board (+12 dB)

Specification:

Gain Switch	Specification
0 dB	$A = 250 \pm 10$ mV
6 dB	$A = 500 \pm 20$ mV
12 dB	$A = 1000 \pm 50$ mV

Adjusting method: GAIN switch/CCU front panel and adjust each adjusting point so that the corresponding video level A satisfies the specification.

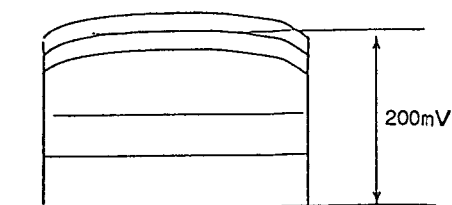


After adjusting, return the GAIN switch to "0 dB".
 DXC-C1(UC)
 DXC-C1MDP(EK)

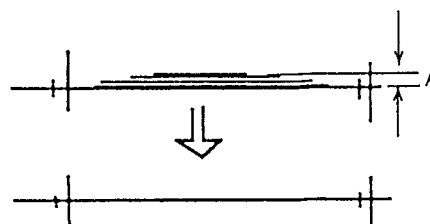
4-2-5. Y1, Y2 Gain Adjustment

Object: Colorbar chart
 Measuring Equipment: Oscilloscope (5 μ s/div)
 Trigger: TP3 (VD)/TG-126 board
 Measuring Point: TP11 (VAP), TP9 (YH IN), (GND:E2)/TG-126 board
 Adjusting Point: $\odot$ RV14, $\odot$ RV15/TG-126 board
 Adjusting Method:

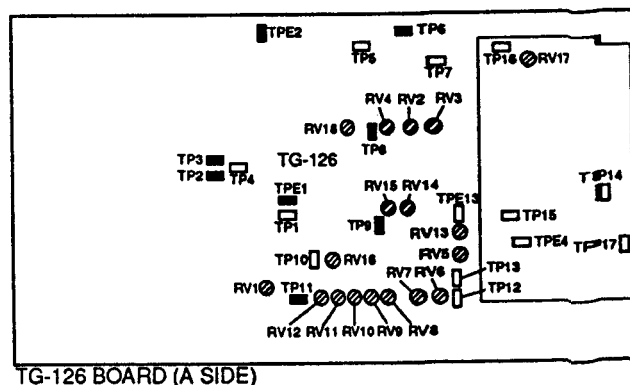
- 1) Adjust the iris control so that the level of TP9 becomes 200 mV.



- 2) Rotate $\odot$ RV15 in the clockwise direction fully.
- 3) Adjust $\odot$ RV14 so that the level of TP-11 becomes minimum.



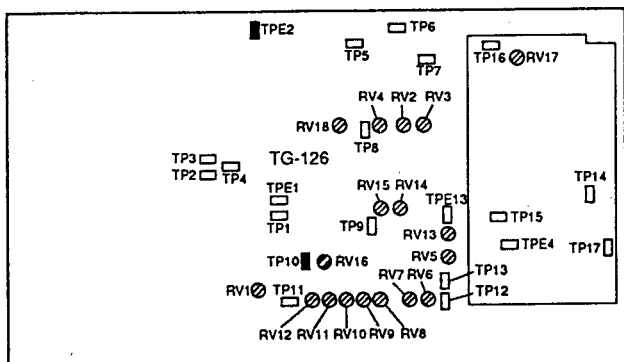
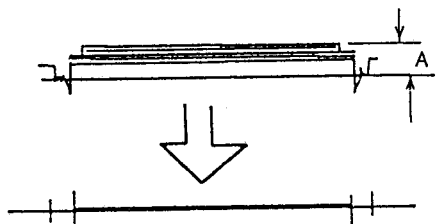
- 4) Adjust $\odot$ RV15 so that the level of TP-11 becomes minimum.



TG-126 BOARD (A SIDE)

4-2-6. DL, YH Gain Adjustment

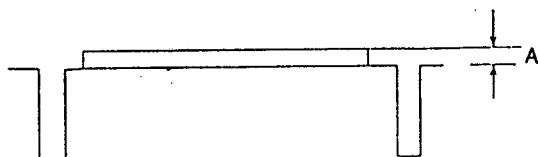
Object: Colorbar chart
 Measuring Equipment: Oscilloscope (5 μ s/div)
 Measuring Point: TP10 (GND:E2)/TG-126 board
 Adjusting Point: $\odot$ RV16/TG-126 board
 Adjusting method: Adjust $\odot$ RV16 so that the level of TP-10 becomes minimum.



TG-126 BOARD (A SIDE)

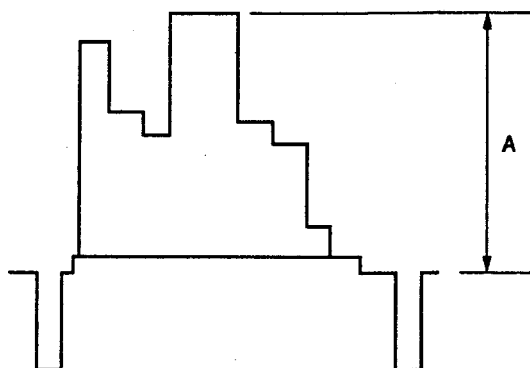
4-2-7. Setup Level Adjustment

Measuring Equipment: Waveform monitor
 Adjusting Point: $\odot$ RV12/PR-181 board
 Specification: NTSC: $A=3 \pm 1$ IRE
 PAL: $A=20 \pm 10$ mV
 Adjusting Method: Perform adjustment with the lens cap covered.
 After adjusting, remove the lens cap.

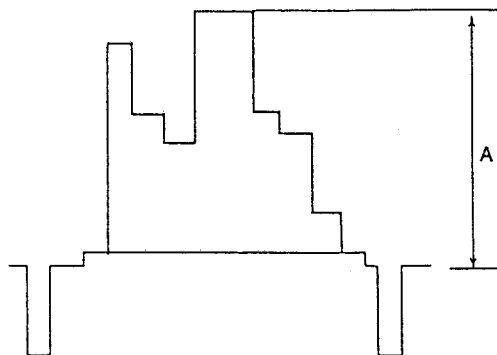


4-2-8. Y Level Adjustment

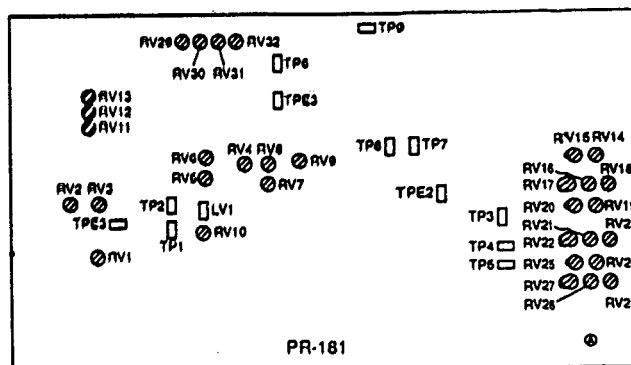
Object: Colorbar chart
 Measuring Equipment: Waveform monitor (LUM)
 Adjusting Point: $\odot$ RV11/PR-181 board
 Specification: NTSC: $A=100 \pm 2$ IRE
 PAL: $A=700 \pm 10$ mV
 Adjusting Method: When the white level is clipped, rotate $\odot$ RV13 in the counterclockwise direction and then adjust it.



NTSC: $A=100 \pm 2$ IRE



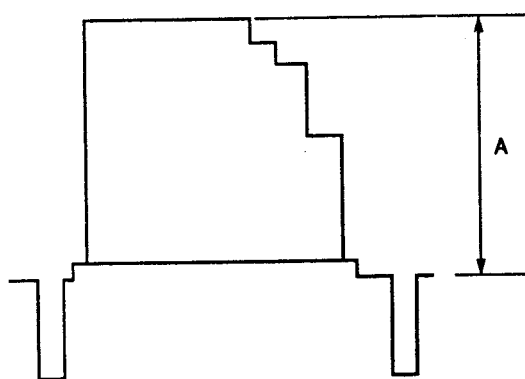
PAL: $A=700 \pm 10$ mV



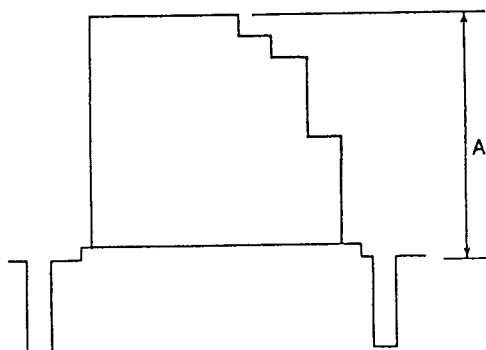
PR-181 BOARD (A SIDE)

4-2-9. White Clip Adjustment

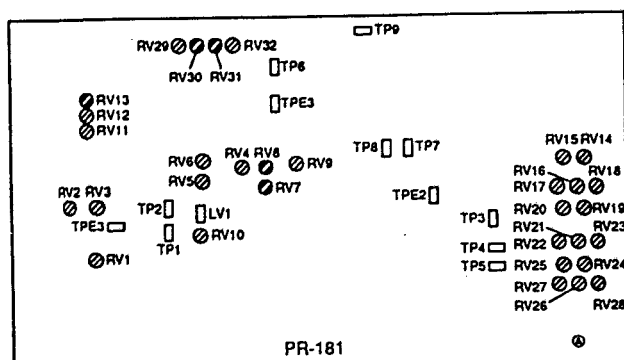
Object: Colorbar chart
 Measuring Equipment: Waveform monitor (LUM)
 Adjusting Point: ●RV13/PR-181 board
 Specification: NTSC: $A=110 \pm 2$ IR
 PAL: $A=770 \pm 14$ mV



NTSC: $A=110 \pm 2$ IR



PAL: $A=770 \pm 14$ mV



PR-181 BOARD (A SIDE)

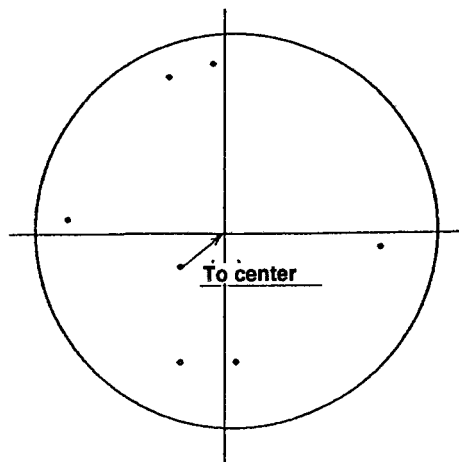
4-2-10. Carrier Balance Adjustment

Measuring Equipment: Vectorscope, waveform monitor (LUM)

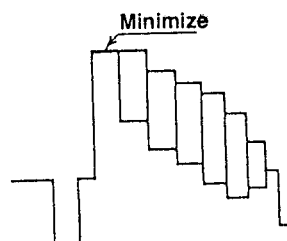
Adjusting Point: ●RV7, ●RV8, ●RV30, ●RV31/
 PR-181 board

Adjusting Method:

- 1) Set the MODE switch/CCU front panel to "BARS".
- 2) Adjust the GAIN of the vectorscope to maximum.
- 3) Adjust ●RV7 and ●RV8 alternately so that the black beam spot comes to the center on the vectorscope.

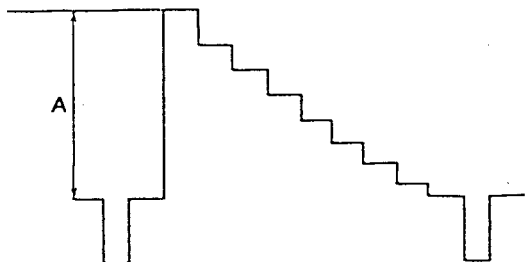


- 4) Return the GAIN of the vectorscope to 75%.
- 5) Adjust ●RV30 and ●RV31 alternately so that the white level on the waveform monitor becomes minimum.



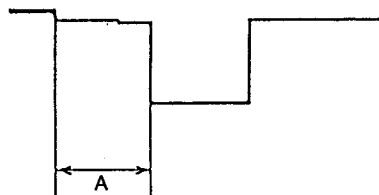
4-2-11. BARS Y Level Adjustment

Measuring Equipment: Waveform monitor
 Adjusting Point: ⚙RV32/PR-181 board
 Specification: NTSC: $A=77 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV



4-2-13. BARS Width Adjustment

Measuring Equipment: Vectorscope ($1 \mu\text{s}/\text{div}$)
 Adjusting Point: ⚙RV29/PR-181 board
 Specification: NTSC: $A=5.5 \pm 0.2 \mu\text{s}$
 PAL: $A=5.3 \pm 0.2 \mu\text{s}$
 Adjusting Method: Enlarge the SYNC part and adjust it.

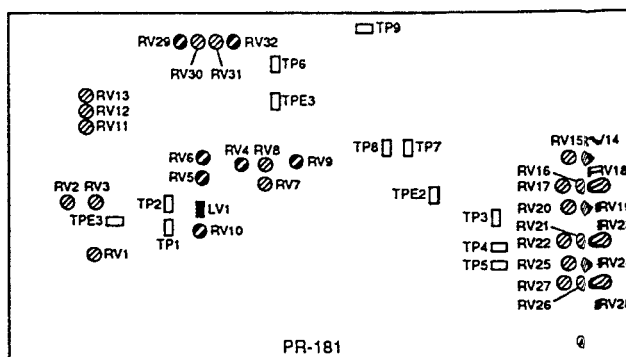
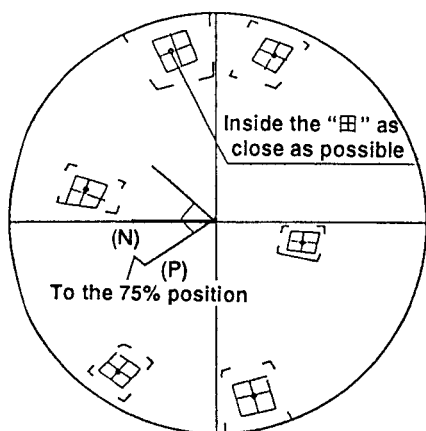


4-2-12. BARS Vector Adjustment

Measuring Equipment: Vectorscope
 Adjusting Point: ⚙RV4, ⚙RV5, ⚙RV6, ⚙RV9, ⚙RV10,
 ⚙LV1/PR-181 board

Adjusting Method:

- 1) Adjust the PHASE of the vectorscope and adjust the phase of the burst.
- 2) Adjust ⚙RV10 so that each beam spot comes inside the “田” on the vectorscope.
- 3) Adjust ⚙RV5, ⚙RV6, ⚙LV1 alternately so that each beam spot comes as close as possible to the center of the “田” on the vectorscope.
- 4) Adjust ⚙RV9 so that the level of the vectorscope becomes 75%.



PR-181 BOARD (A SIDE)

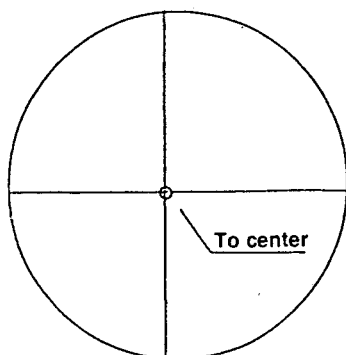
4-2-14. Color Difference Cleaning Adjustment

Measuring Equipment: Vectorscope (1 μ s/div)

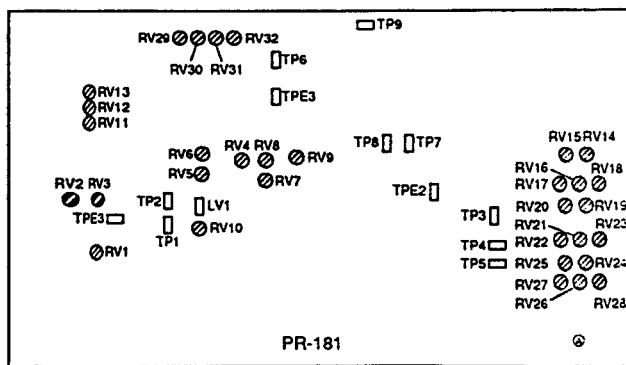
Adjusting Point: $\odot$ RV2, $\odot$ RV3/PR-181 board

Adjusting Method:

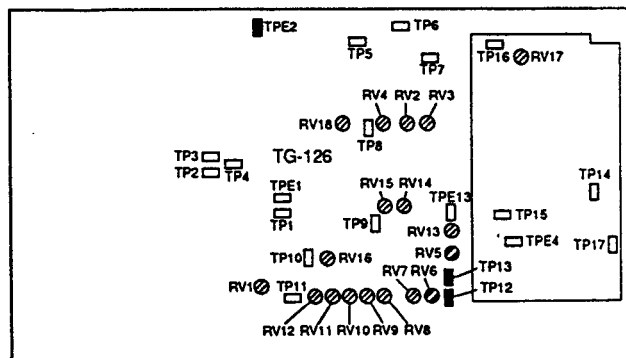
- 1) Set the MODE switch/CCU panel to "CAM".
- 2) Cover the lens with the cap.
- 3) Set the GAIN of the vectorscope to maximum.
- 4) Adjust $\odot$ RV2 and $\odot$ RV3 alternately so that the black beam spot comes to the center on the vectorscope.



- 5) Return the GAIN of the vectorscope to 75%.
- 6) After adjusting, remove the lens cap.



PR-181 BOARD (A SIDE)



TG-126 BOARD (A SIDE)

DXC-C1(UC)
DXC-C1MDP(EK)

4-2-15. 3200° K Adjustment

Measuring Equipment: Oscilloscope, vectorscope

Measuring Point: TP12 (GND:E2), TP13 (GND:E2)/
TG-126 board

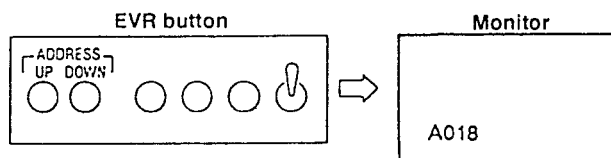
Adjusting Point: $\odot$ RV5, $\odot$ RV6/TG-126 board

Specification: $A=4.0 \pm 0.1$ V

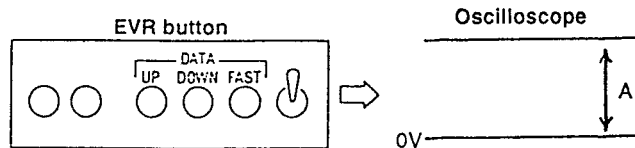
$B=4.0 \pm 0.1$ V

Adjusting Method:

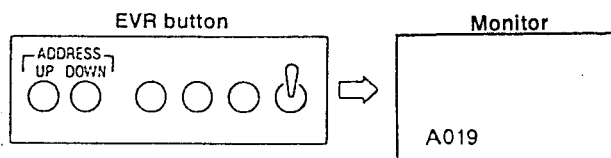
- 1) Adjust the monitor display to "A018" using the UP/DOWN button at the address side of the EVR adjusting tool.



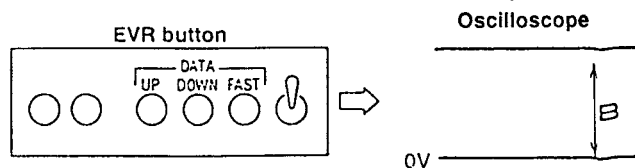
- 2) Adjust the level of TP12 (R CONT) to A using the UP/DOWN button at the data side of the EVR adjusting tool. (The data will change quickly when the FAST button is pressed simultaneously.)



- 3) Adjust the monitor display to "A019" using the UP/DOWN button at the address side of the EVR adjusting tool.

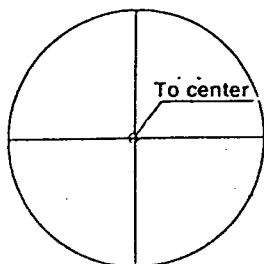


- 4) Adjust the level of TP13 (B CONT) to B using the UP/DOWN button at the data side of the EVR adjusting tool.



- 5) Adjust the monitor display to "A020" using the UP/DOWN button at the address side of the EVR adjusting tool.

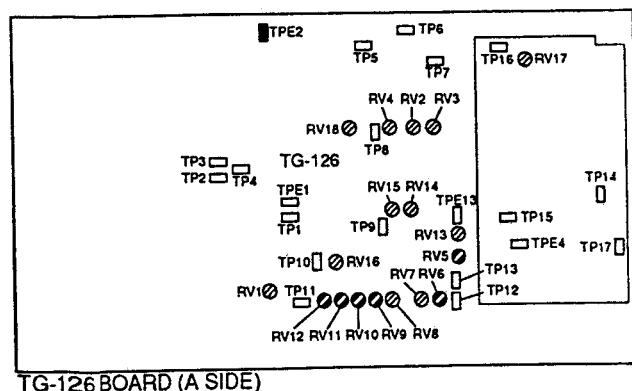
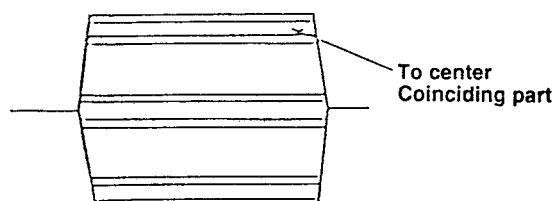
- 6) Adjust the GAIN of the vectorscope to maximum.
- 7) Adjust $\odot$ RV5 and $\odot$ RV6 alternately so that the white beam spot comes to the center on the vectorscope.



- 8) Return the GAIN of the vectorscope to 75%.

4-2-16. C1 Gain Adjustment

Object: Colorbar chart
 Measuring Equipment: Oscilloscope (2 μ s/div)
 Measuring Point: TP1 (GND:E2)/PR-181 board
 Adjusting Point: $\odot$ RV13/TG-126 board
 Adjusting Method: Adjust $\odot$ RV13 so that the coinciding parts of the waveform of TP1 (R-Y) shown in the figure disappear.



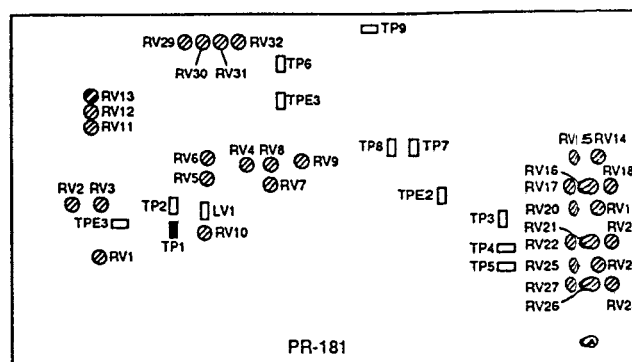
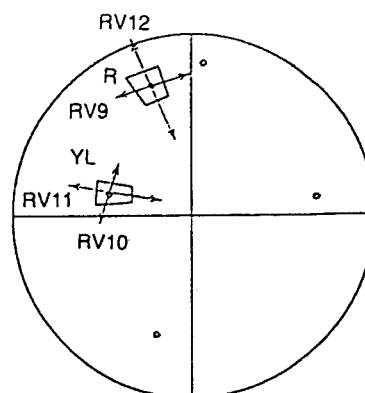
TG-126 BOARD (A SIDE)

4-2-17. Color Reproduction Adjustment

Object: Colorbar chart
 Measuring Equipment: Vectorscope
 Adjusting Point: $\odot$ RV9, $\odot$ RV10, $\odot$ RV11, $\odot$ RV12, $\odot$ RV5, $\odot$ RV6/TG-126 board

Adjusting Method:

- 1) Adjust the iris control so that the white level of the waveform monitor becomes 100 IRE (700 mV).
- 2) Adjust $\odot$ RV5 and $\odot$ RV6 alternately so that the white beam spot comes to the center on the vectorscope.
- 3) Adjust $\odot$ RV9, $\odot$ RV10, $\odot$ RV11, and $\odot$ RV12 alternately so that the red (R), yellow (YL) beam spots on the vectorscope go inside the "□" of the color frame.

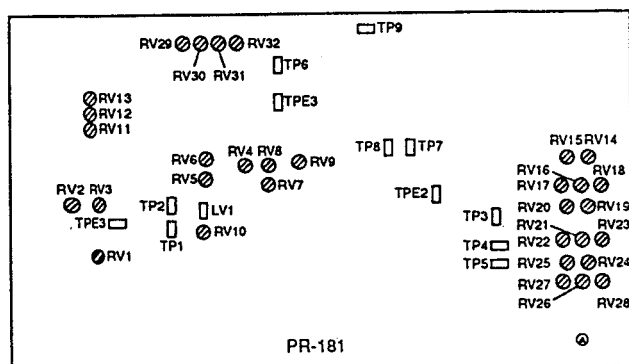
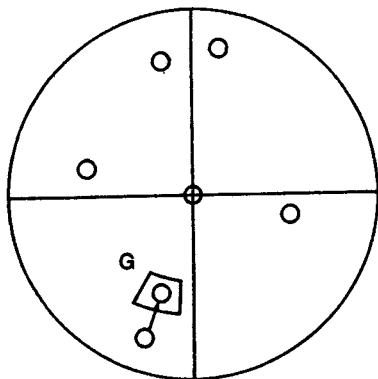


PR-181 BOARD (A SIDE)

4-2-18. G Color Reproduction Correction

Object: Colorbar chart
 Measuring Equipment: Vectorscope
 Adjusting Point: ●RV1/PR-181 board
 Adjusting Method:

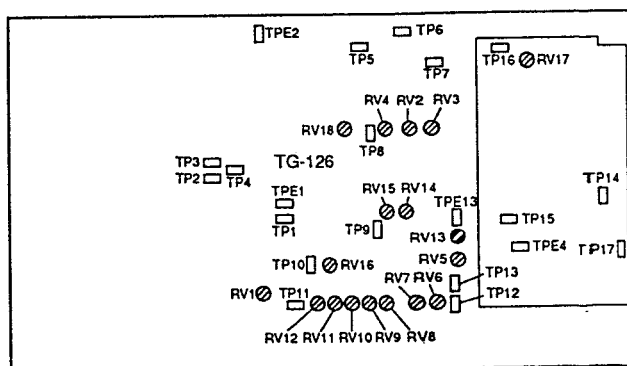
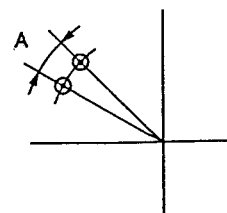
- 1) Adjust ●RV1 so that the green (G) beam spot comes inside the "□" of the color frame on the vectorscope.
- 2) Repeat "4-2-17. Color Reproduction Adjustment" until the color beam spots on the vectorscope are as close as possible to the center of their color frames.



PR-181 BOARD (A SIDE)

4-2-19. Beam Spot Deviation Check

Object: Colorbar chart
 Measuring Equipment: Vectorscope
 Adjusting Point: ●RV13/TG-126 board
 Specification: Within $A=5^\circ$
 Adjusting Method: Check that the color beam spot deviations A on the vectorscope are within the specification. If they are not, adjust ●RV13 again.



TG-126 BOARD (A SIDE)

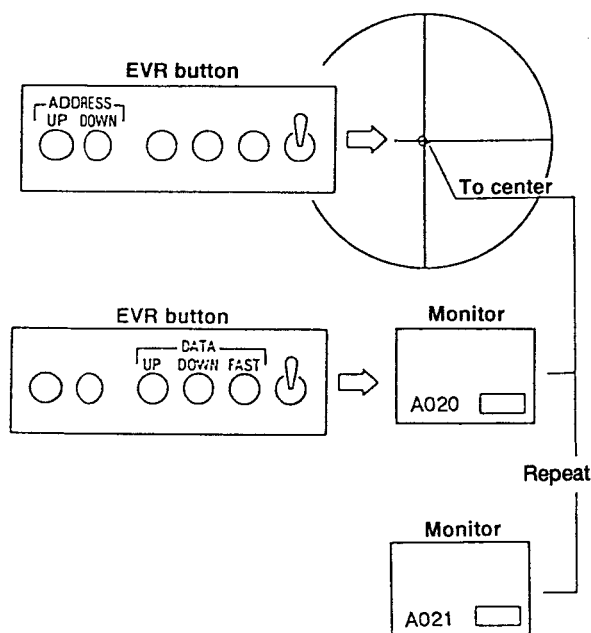
4-2-20. Manual White Balance Adjustment

Object: Colorbar chart

Measuring Equipment: Vectorscope

Adjusting Method:

- 1) Adjust the WHITE BALANCE switch/CCU front panel to "MANU".
- 2) Adjust the monitor display to "A020" using the UP/DOWN button at the address side of the EVR adjusting tool.
- 3) Adjust the UP/DOWN button at the data side of the EVR adjusting tool so that white beam spot is at the center on the vectorscope.
- 4) Adjust the monitor display to "A021" using the UP/DOWN button at the address side of the EVR adjusting tool.
- 5) Adjust the UP/DOWN button at the data side of the EVR adjusting tool so that the white beam spot is at the center on the vectorscope.
- 6) Repeat steps 2) through 5).



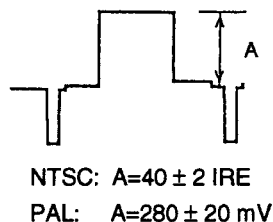
4-2-21. ATW Offset Adjustment

Object: White window chart

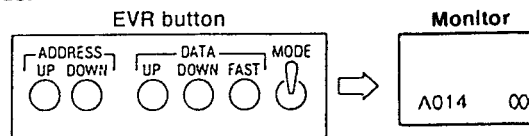
Measuring Equipment: Waveform monitor, vectorscope

Adjusting Method:

- 1) Adjust the WHITE BALANCE switch/CCU front panel to "ATW".
- 2) Adjust the iris control so that the white level of the waveform monitor becomes the following value.

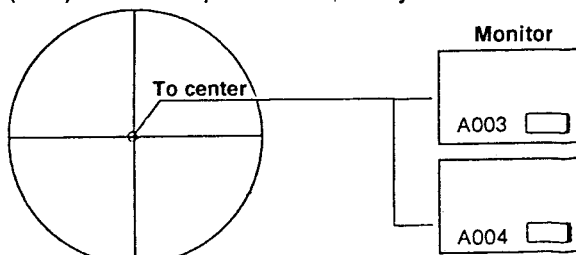


- 3) Adjust the monitor display to "A014" using the UP/DOWN button at the address side of the EVR adjusting tool and to "000" using the UP/DOWN button at the data side.

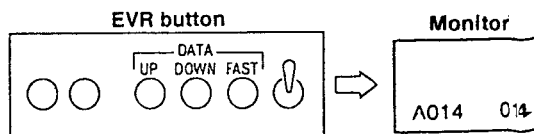


- 4) Adjust the data of addresses "A003" and "A004" of the EVR adjusting tool using the UP/DOWN button at the data side so that the white beam spot is at the center on the vectorscope.

(Note) The beam spot will move slowly.



- 5) Adjust the monitor display to "A014" using the UP/DOWN button at the address side of the EVR adjusting tool and to "014" using the UP/DOWN button at the data side.



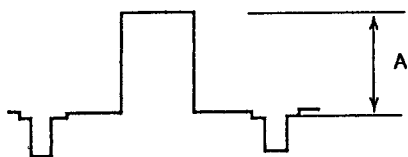
- 6) Check that the white beam spot does not deviate when the GAMMA switch/CCU front panel is switched ON and OFF. If they do, adjust from step 4).
- 7) Return the GAMMA switch/CCU front panel to "ON".

4-2-22. LL Adjustment

Object: White window chart
 Measuring Equipment: Oscilloscope, waveform monitor
 Measuring Point: TP9 (GND:E2)/PR-181 board
 Specification: NTSC: $B=40 \pm 5$ IRE
 $C<50$ IRE
 PAL: $B=280 \pm 20$ mV
 $C<350$ mV

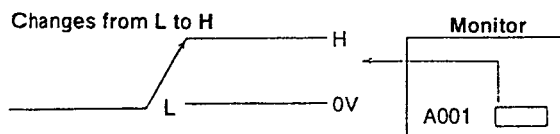
Adjusting Method:

- 1) Adjust the WHITE BALANCE switch/CCU front panel to "3200".
- 2) Adjust the iris control so that the white level of the waveform monitor becomes the following value.



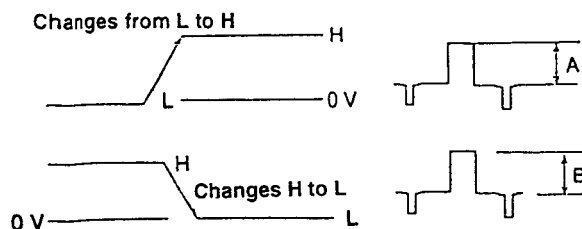
NTSC: $A=40 \pm 2$ IRE
 PAL: $A=280 \pm 20$ mV

- 3) Adjust the monitor display to "A001" using the UP/DOWN button at the address side of the EVR adjusting tool.
- 4) Increase the data gradually using the UP/DOWN button at the data side of the EVR adjusting tool and stop when the level of TP9 becomes L (0 V) to H (5 V).



- 5) Change the iris control, and check that the white level A of the waveform monitor when the level of TP9 changes from L to H and the white level C when the level changes from H to L satisfies the specified values.

If not, adjust from step 4) again.



DXC-C1(UC)
 DXC-C1MDP(EK)

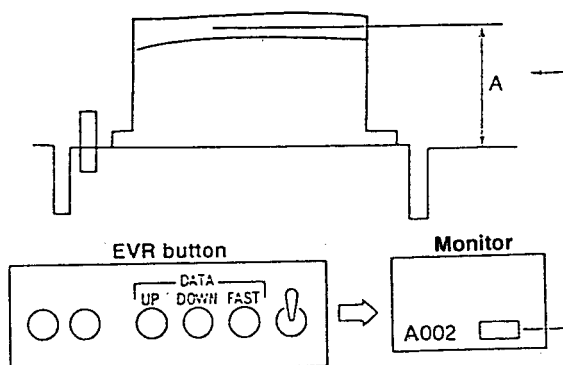
4-2-23. CCD IRIS Adjustment

Object: All white pattern
 Measuring Equipment: Waveform monitor
 Specification: NTSC: $A=50 \pm 2$ IRE
 PAL: $A=350 \pm 20$ mV

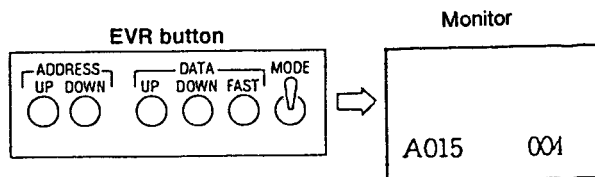
Adjusting Method:

- 1) Adjust the SHUTTER switch/CCU front panel to "CCD IRIS".
- 2) Set the iris control to F=4.
- 3) Adjust the monitor display to "A002" using the UP/DOWN button at the address side of the EVR adjusting tool.
- 4) Adjust level A of the waveform monitor to the specified value using the UP/DOWN button at the data side of the EVR adjusting tool.

As the waveform will be fluctuating up and down, adjust to the average value.



- 5) Adjust the monitor display to "A015" using the UP/DOWN button at the address side of the EVR adjusting tool and to "004" using the UP/DOWN button at the data side.



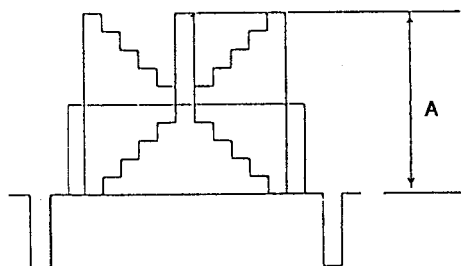
- 6) Check that the waveform has stopped fluctuating.
- 7) Return the SHUTTER switch/CCU front panel to "OFF".

4-2-24. AGC Adjustment (1)

Object: Grayscale chart
 Measuring Equipment: Waveform monitor
 Specification: NTSC: B=104 $\pm$ 2 IRE
 PAL: B=730 $\pm$ 20 mV

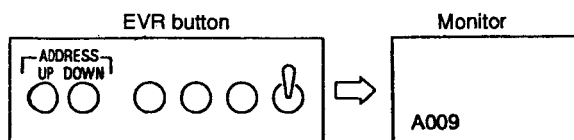
Adjusting Method:

- 1) Adjust the iris control so that the white level of the waveform monitor becomes the following value.

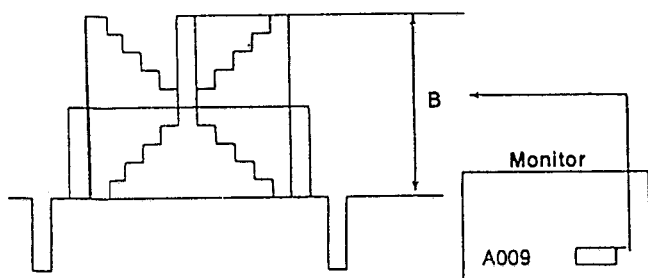


NTSC: A=100 $\pm$ 2 IRE
 PAL: A=700 $\pm$ 20 mV

- 2) Set the GAIN switch/CCU front panel to "AGC".
- 3) Adjust the monitor display to "A009" using the UP/DOWN button at the address side of the EVR adjusting tool.



- 4) Adjust the level B of the waveform monitor to the specified value using the UP/DOWN button at the data side of the EVR adjusting tool.



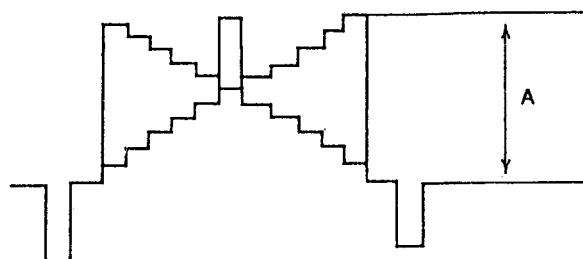
- 5) Adjust the monitor display to "A010" using the UP button at the address side of EVR adjusting tool.
- 6) Return the GAIN switch to "0 dB".

4-2-25. AGC Adjustment (2)

Object: Grayscale chart
 Measuring Equipment: Waveform monitor
 Adjusting Point: RV18/TG-126 board
 Specification: NTSC: B=80 $\pm$ 2 IRE
 PAL: B=560 $\pm$ 20 mV

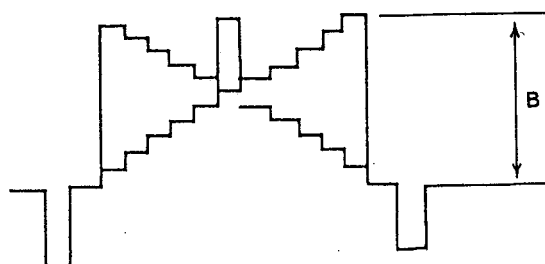
Adjusting Method:

- 1) Switch the S1 (AGC DET)/TG-126 board to "PEAK".
- 2) Adjust the iris control so that the white level of the waveform monitor becomes the following value.

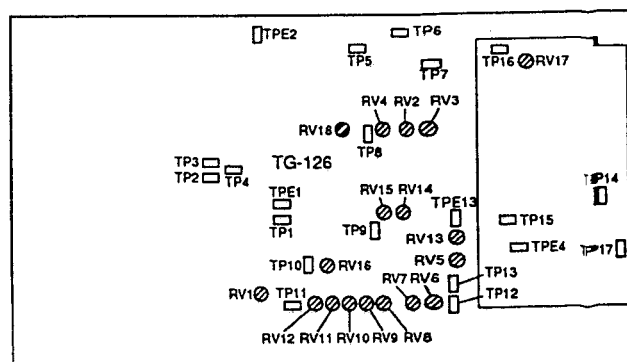


NTSC: A=50 $\pm$ 2 IRE
 PAL: A=350 $\pm$ 20 mV

- 3) Set the GAIN switch/CCU front panel to "AGC".
- 4) Adjust RV18 so that the white level A of the waveform monitor becomes the specified value.



- 5) Adjust the S1 (AGC DET)/TG-126 board to "AVE".
- 6) Return the GAIN switch to "0 dB".



TG-126 BOARD (A SIDE)

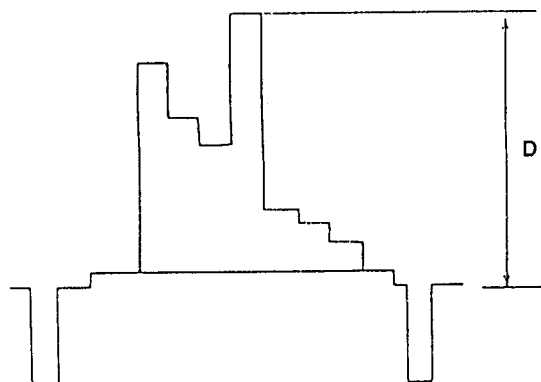
4-2-26. RGB R Output Adjustment

Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (R)
 Adjusting Point: ⓈRV14, ⓈRV15, ⓈRV17/PR-181 board

Specification: NTSC: $A=3 \pm 1$ IRE
 $B=100 \pm 1$ IRE
 $C=110 \pm 2$ IRE
 PAL: $A=20 \pm 5$ mV
 $B=700 \pm 10$ mV
 $C=770 \pm 20$ mV

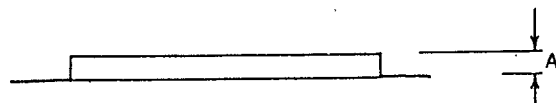
Adjusting method:

- 1) Adjust the iris control so that the white level of the waveform monitor becomes the following value.

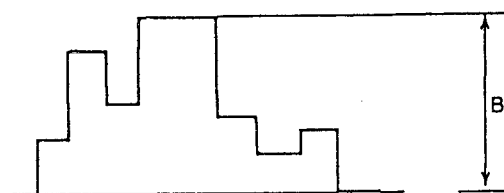


NTSC: $D=100 \pm 5$ IRE
 PAL: $D=700 \pm 20$ mV

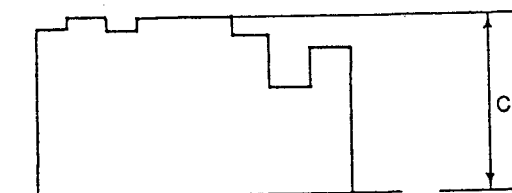
- 2) Set the GAMMA switch/CCU rear panel to "ON".
- 3) Cover the lens with the lens cap.
- 4) Adjust ⓈRV15 so that the SET UP level A of the waveform monitor becomes the specified value.



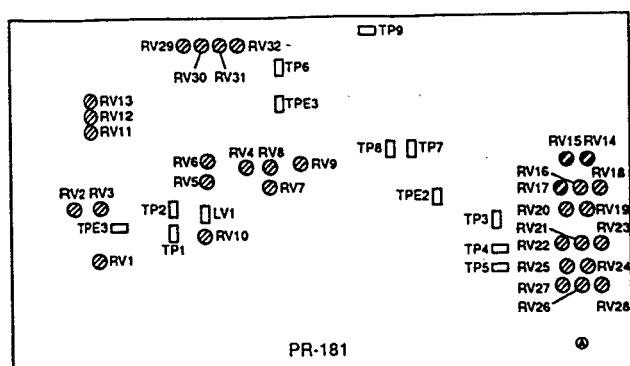
- 5) Remove the cap.
- 6) Adjust ⓈRV17 so that the white level B of the waveform monitor becomes the specified value.



- 7) Set the GAIN switch/CCU front panel to "12".
- 8) Adjust ⓈRV14 so that the white level C of the waveform monitor becomes the specified value.



- 9) Return the GAIN switch to "0 dB".



PR-181 BOARD (A SIDE)

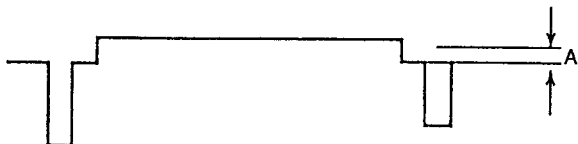
DXC-C1(UC)
 DXC-C1MDP(EK)

4-2-27. RGB G Output Adjustment

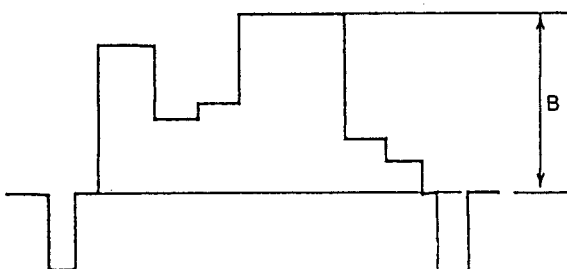
Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (G)
 Adjusting Point: ⚙RV20, ⚙RV22, ⚙RV19/PR-181 board
 Specification: NTSC: A=3 ± 1 IRE
 B=100 ± 1 IRE
 C=110 ± 2 IRE
 PAL: A=20 ± 10 mV
 B=700 ± 10 mV
 C=770 ± 20 mV

Adjusting method:

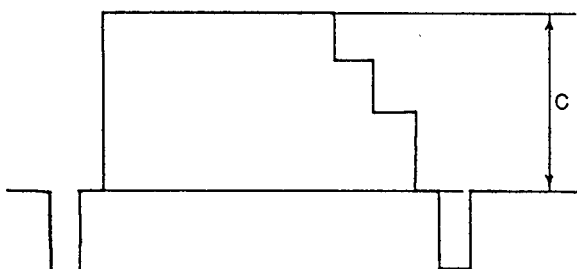
- 1) Cover the lens with the lens cap.
- 2) Adjust ⚙RV20 so that the SET UP level A of the waveform monitor becomes the specified value.



- 3) Remove the cap.
- 4) Adjust ⚙RV22 so that the white level B of the waveform monitor becomes the specified value.



- 5) Set the GAIN switch/CCU front panel to "12".
- 6) Adjust ⚙RV19 so that the white level C of the waveform monitor becomes the specified value.



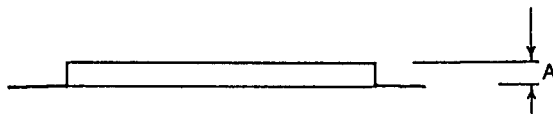
- 7) Return the GAIN switch to "0 dB".

4-2-28 RGB B Output Adjustment

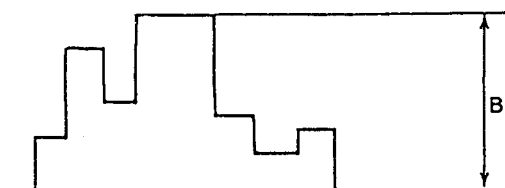
Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (B)
 Adjusting Point: ⚙RV25, ⚙RV27, ⚙RV24/PR-181 board
 Specification: NTSC: A=3 ± 1 IRE
 B=100 ± 1 IRE
 C=110 ± 2 IRE
 PAL: A=20 ± 10 mV
 B=700 ± 10 mV
 C=770 ± 20 mV

Adjusting method:

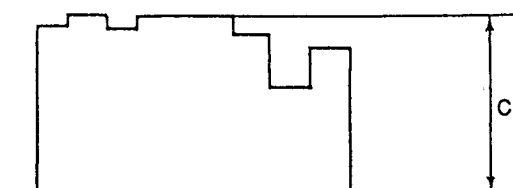
- 1) Cover the lens with the lens cap.
- 2) Adjust ⚙RV25 so that the SET UP level A of the waveform monitor becomes the specified value.



- 3) Remove the cap.
- 4) Adjust ⚙RV27 so that the white level B of the waveform monitor becomes the specified value.



- 5) Adjust the GAIN switch/CCU front panel to "12".
- 6) Adjust ⚙RV24 so that the white level C of the waveform monitor becomes the specified value.



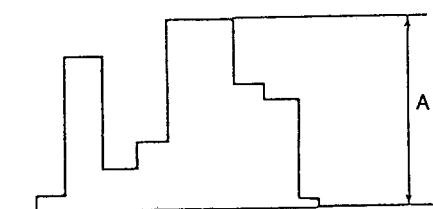
- 7) Return the GAIN switch to "0 dB".

4-2-29. RGB R (GAMMA OFF) Adjustment

Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (R)
 Adjusting Point: ⒶRV18/PR-181 board
 Specification: NTSC: $A=100 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method:

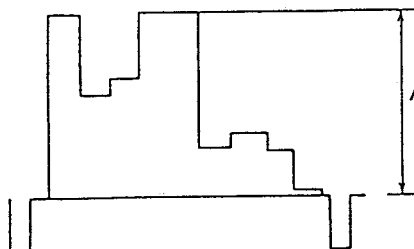
- 1) Set the GAMMA switch/CCU rear panel to "OFF".
- 2) Adjust ⒶRV18 so that the white level A of the waveform monitor becomes the specified value.



4-2-30. RGB G (GAMMA OFF) Adjustment

Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (G)
 Adjusting Point: ⒶRV23/PR-181 board
 Specification: NTSC: $A=100 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method: Adjust ⒶRV23 so that the white level A of the waveform monitor becomes the specified value.

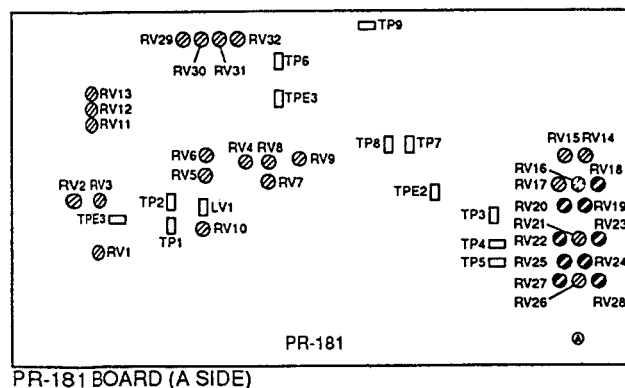
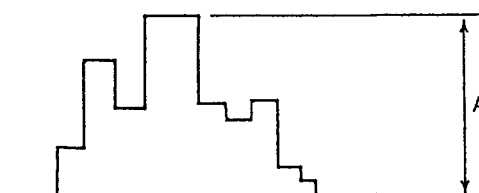


4-2-31. RGB B (GAMMA OFF) Adjustment

Object: Colorbar chart
 Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (B)
 Adjusting Point: ⒶRV28/PR-181 board
 Specification: NTSC: $A=100 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method:

- 1) Adjust ⒶRV28 so that the white level A of the waveform monitor becomes the specified value.
- 2) Return the GAMMA switch/CCU rear panel to "ON".

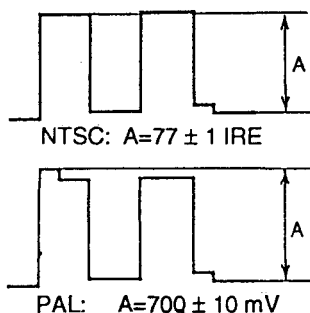


4-2-32. RGB (BARS) R Adjustment

Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (R)
 Adjusting Point: ●RV16/PR-181 board
 Specification: NTSC: $A=77 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method:

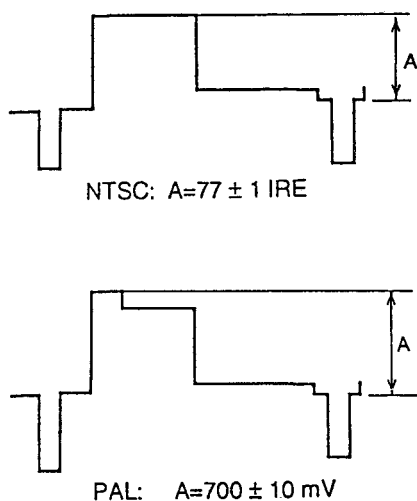
- 1) Set the MODE switch/CCU front panel to "BARS".
- 2) Adjust ●RV16 so that the white level A of the waveform monitor becomes the specified value.



4-2-33. RGB (BARS) G Adjustment

Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (G)
 Adjusting Point: ●RV21/PR-181 board
 Specification: NTSC: $A=77 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method: Adjust ●RV21 so that the white level A of the waveform monitor becomes the specified value.

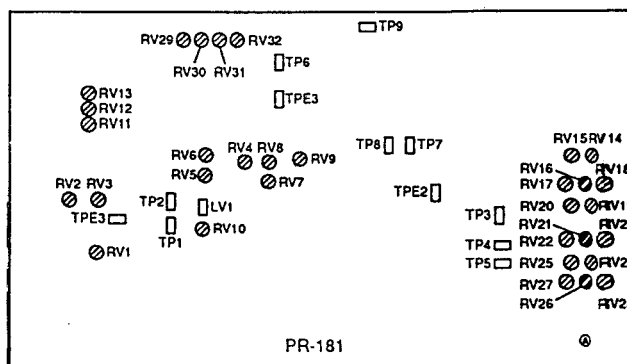
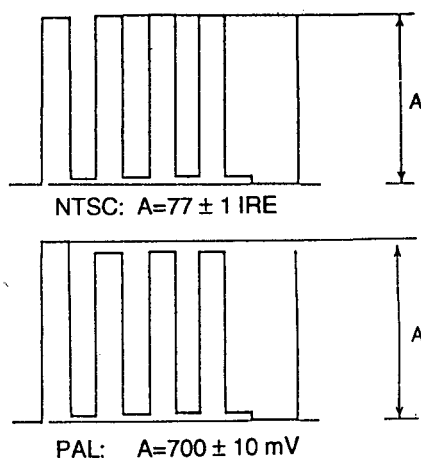


4-2-34. RGB (BARS) B Adjustment

Measuring Equipment: Waveform monitor
 Measuring Point: VIDEO OUT (B)
 Adjusting Point: ●RV26/PR-181 board
 Specification: NTSC: $A=77 \pm 1$ IRE
 PAL: $A=700 \pm 10$ mV

Adjusting method:

- 1) Adjust ●RV16 so that the white level A of the waveform monitor becomes the specified value.
- 2) Return the MODE switch/CCU front panel to "CAM".

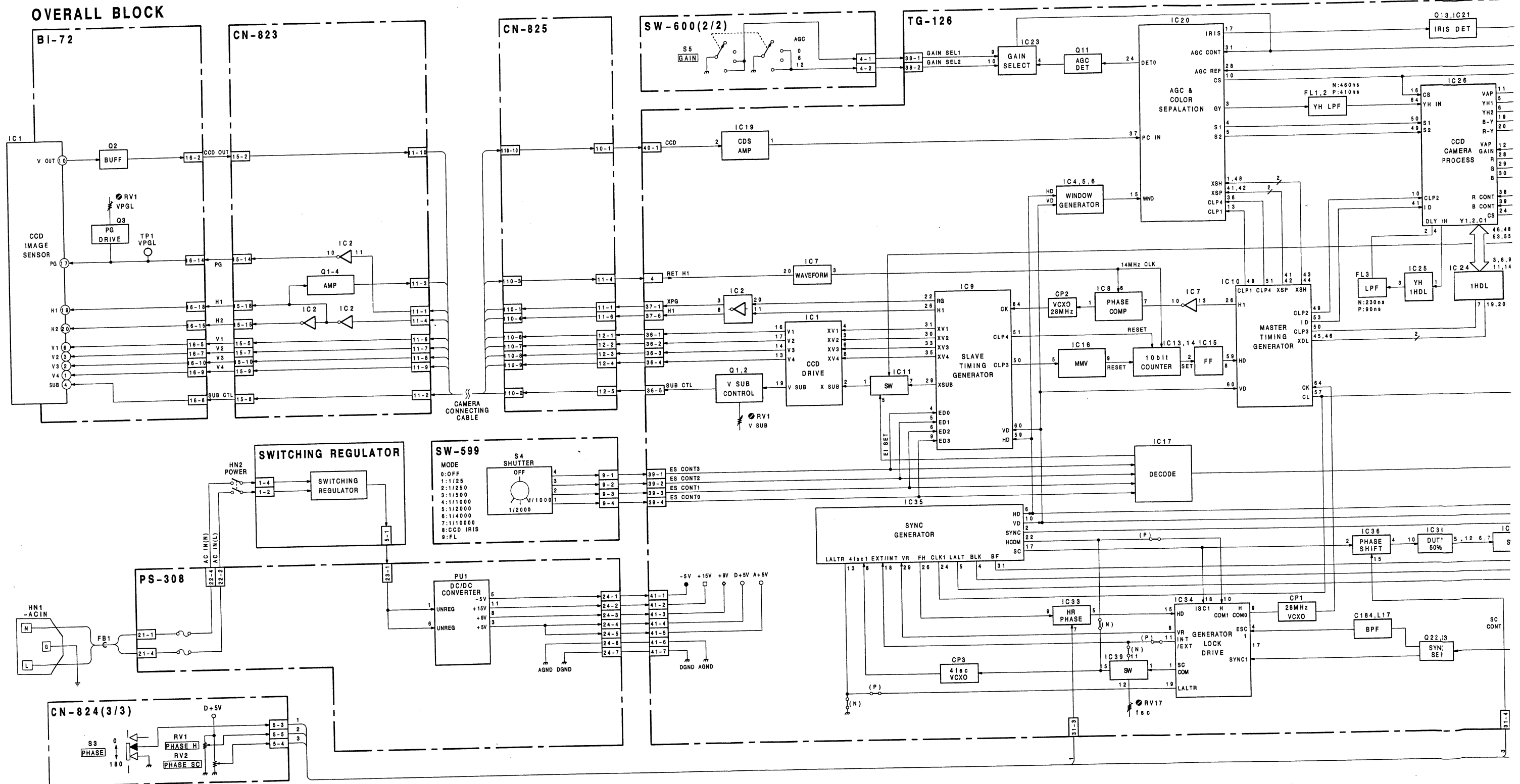


PR-181 BOARD (A SIDE)

Note: Set the mode of the EVR (electronic volume) adjusting tool to "OFF", and disconnect it from the camera unit.

SECTION A BLOCK DIAGRAMS

OVERALL BLOCK



DXC-C1(UCJ)
DXC-C1MDP(EK)

A-1

A-2

A

B

C

D

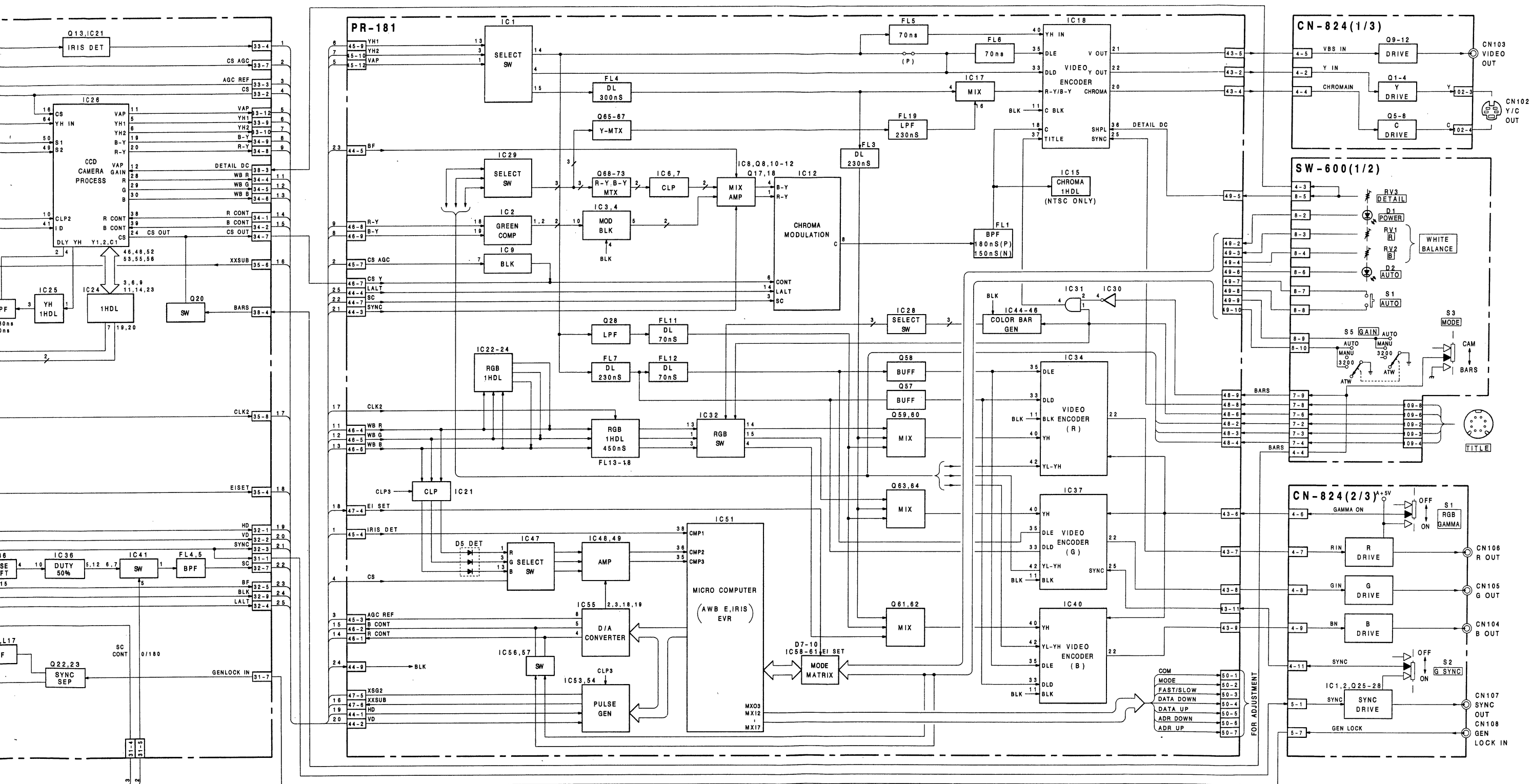
E

F

G

H

OVERALL OVERALL



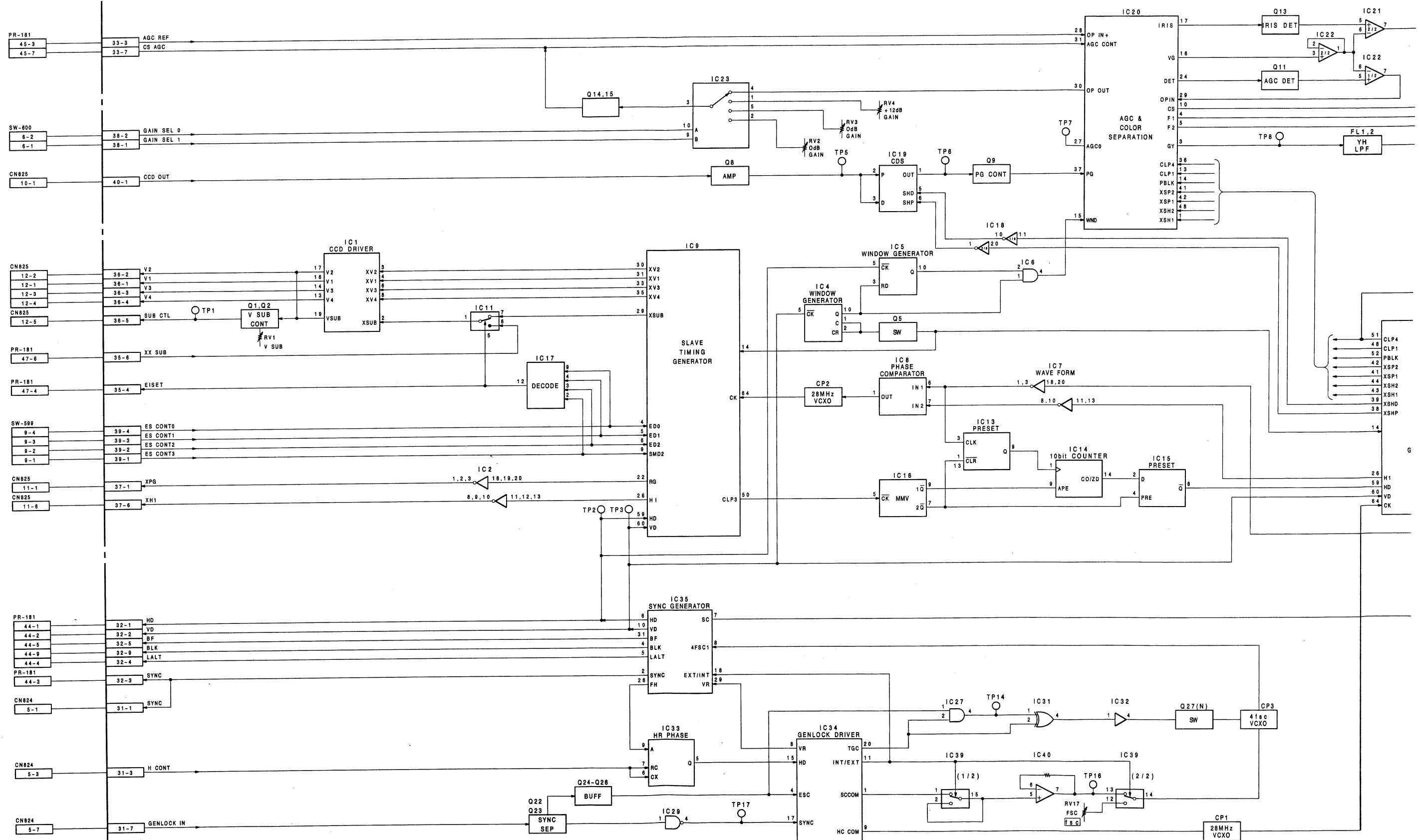
OVERALL BLOCK

DXC-C1(UCJ)
DXC-C1MDP(EK)
B-7DXCC1-QABLOCK/M

A-3

A-4

TG-126 BLOCK



A-5

A - 6

A

B

C

D

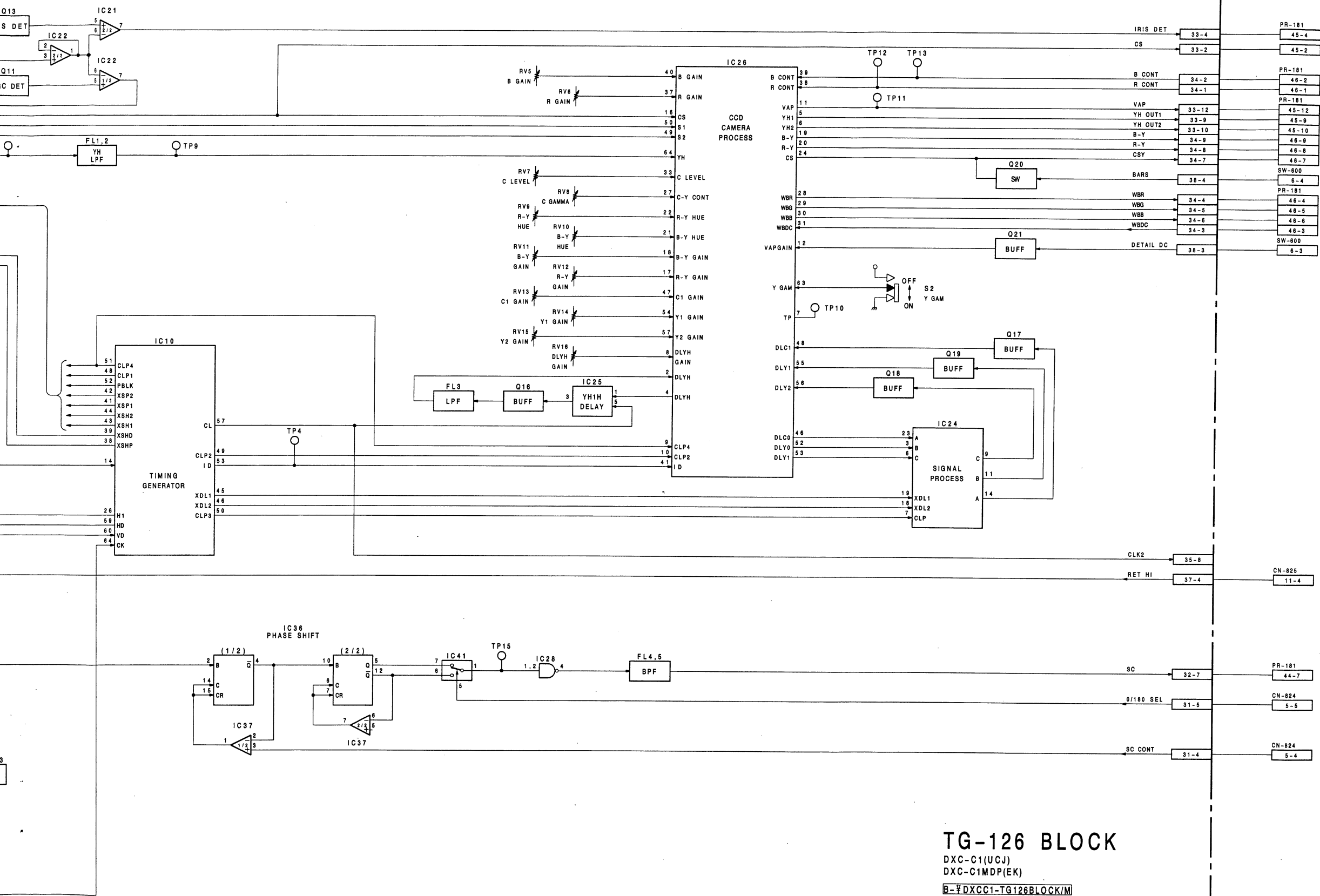
E

F

6

A

1



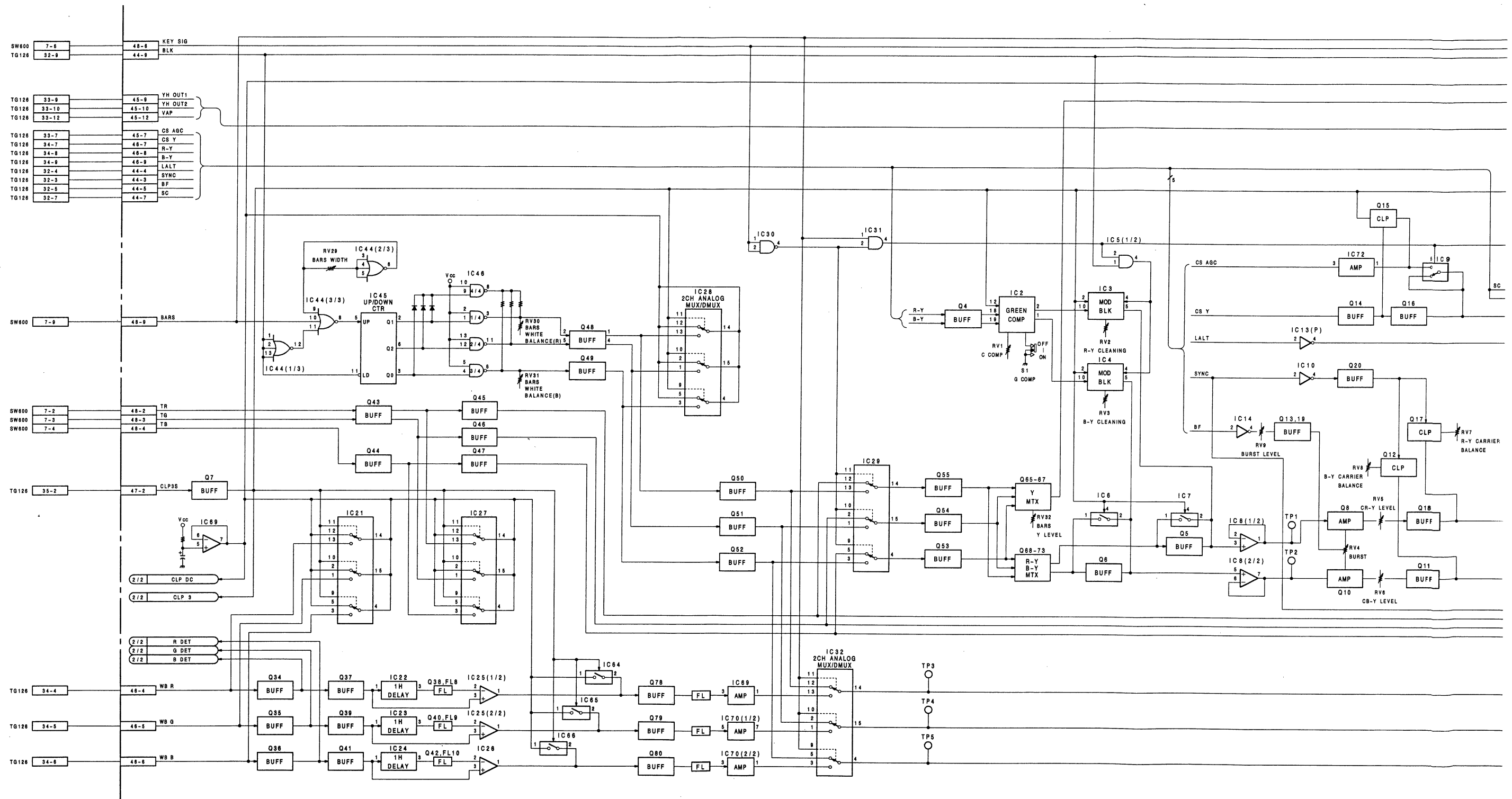
DXC-C1(UCJ)
 DXC-C1MDP(EK)

A-7

A-8

I J K L M N O

PR-181 BLOCK(1/2)



DXC-C1(UCJ)
DXC-C1MDP(EK)

A-9

A-10

A

B

C

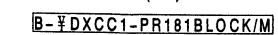
D

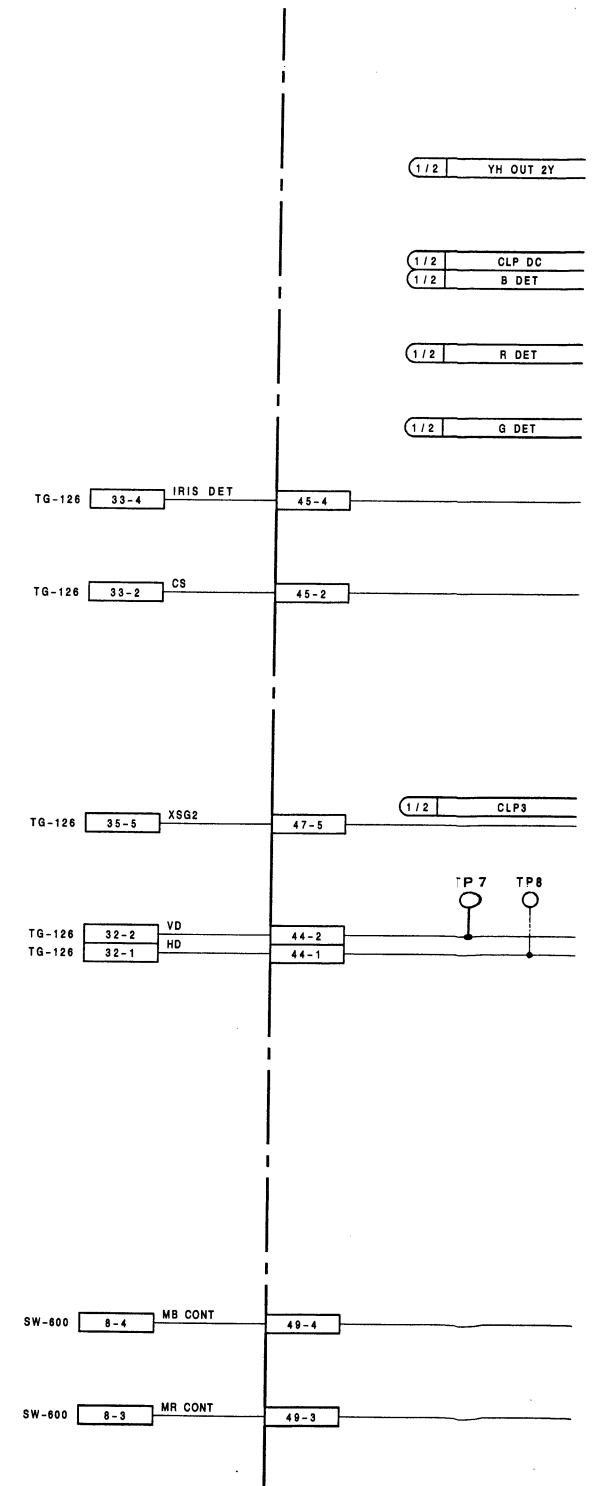
E

F

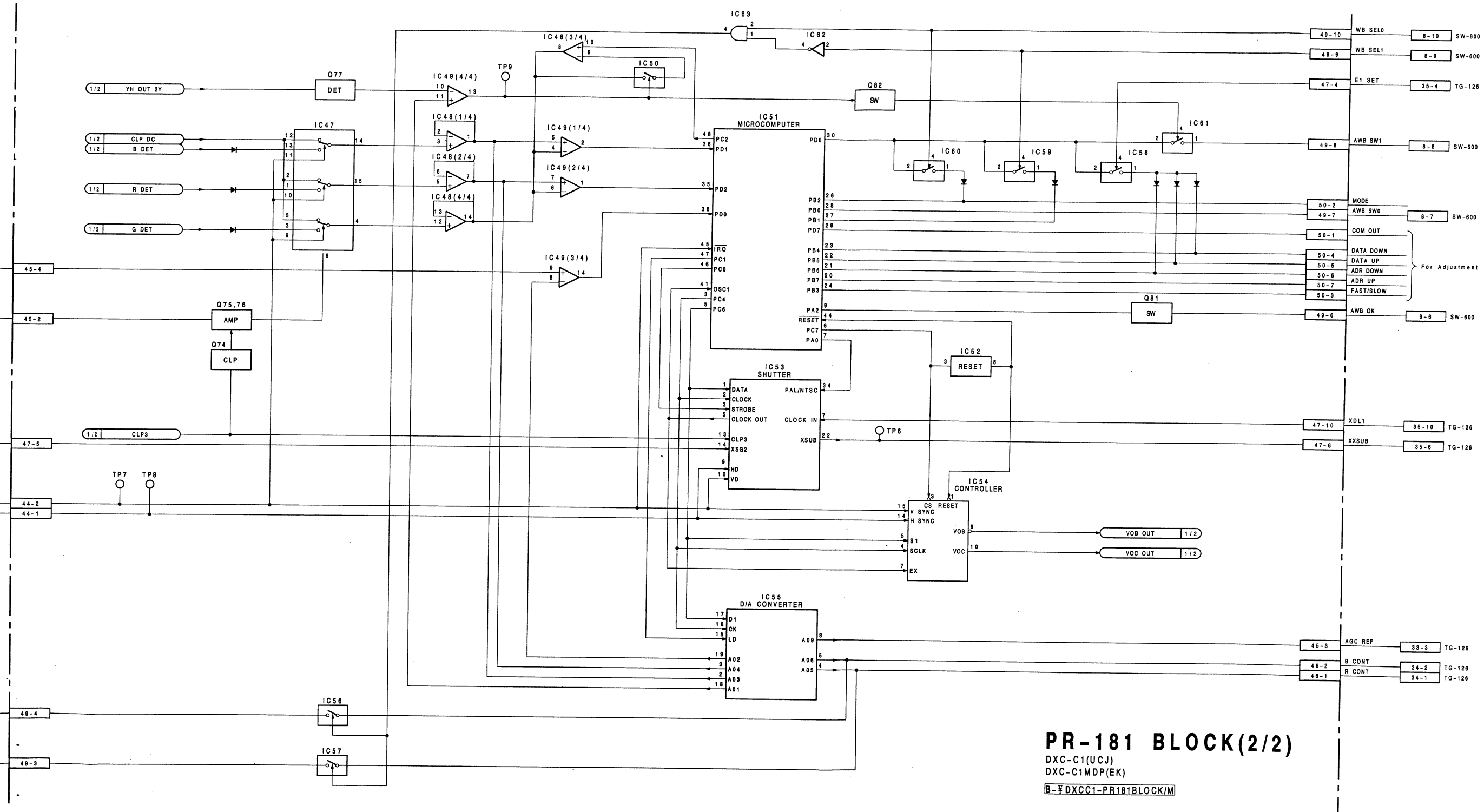
G

H





PR-181 BLOCK(2/2)



PR-181 BLOCK(2/2)

DXC-C1(UCJ)
DXC-C1MDP(EK)

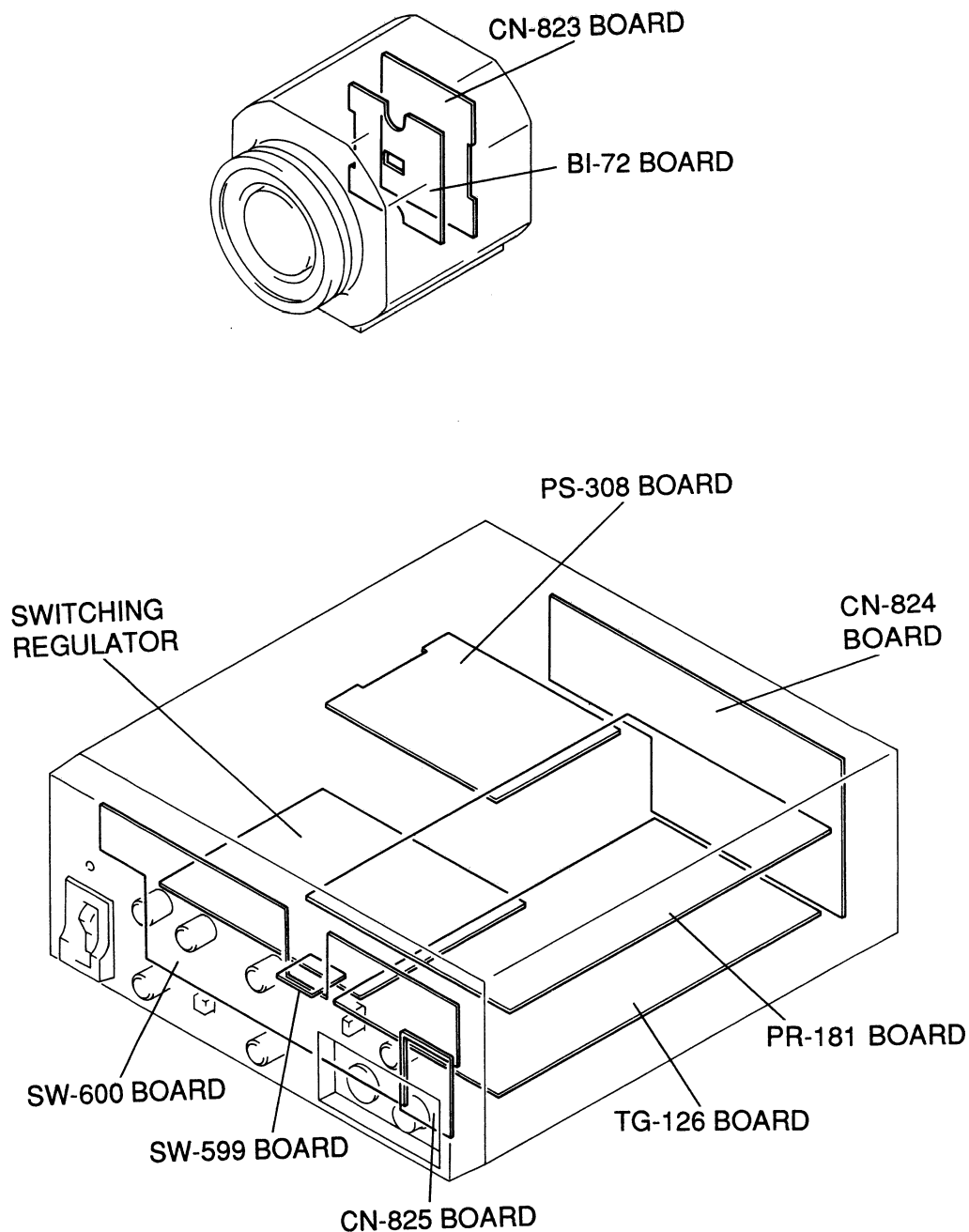
B-¥DXCC1-PR181BLOCK/M

DXC-C1(UCJ)
DXC-C1MDP(EK)

SECTION B

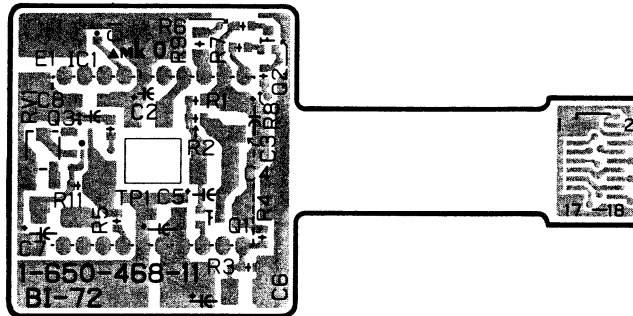
SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATION

BOARD LAYOUT

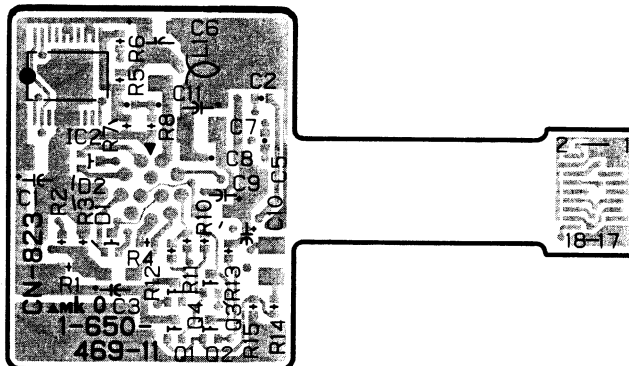


DXC-C1(J,UC)
DXC-C1MDP(EK)

BI-72 BOARD
CN-823 BOARD

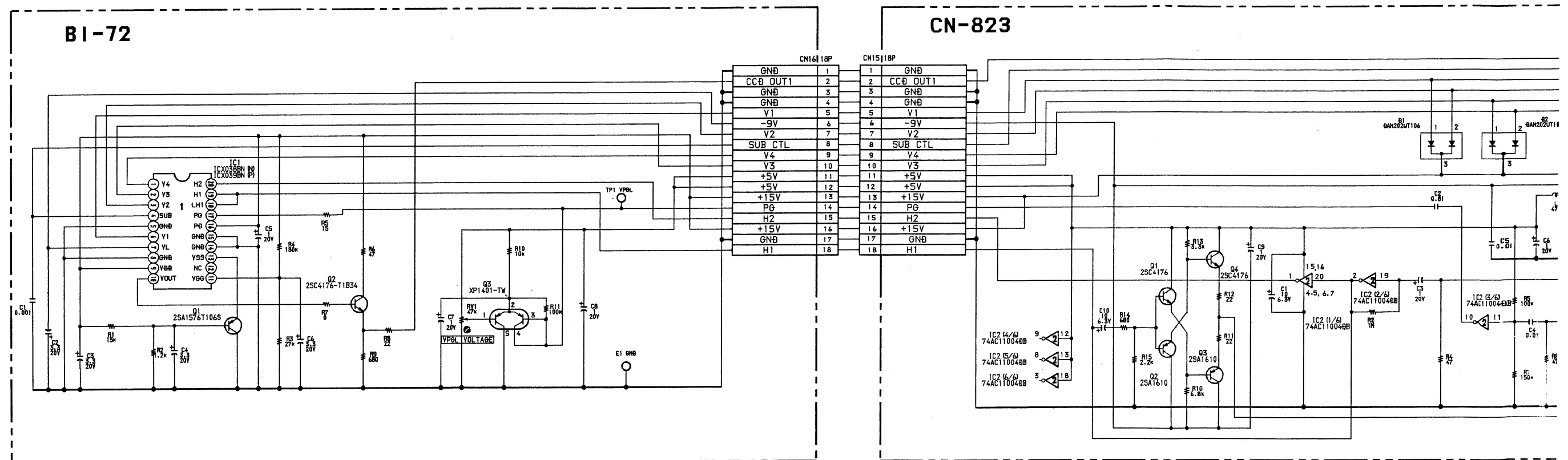


BI-72
1-650-468-11
DXC-C1(J,UC)
DXC-C1MDP(EK)



CN-823
1-650-469-11
DXC-C1(J,UC)
DXC-C1MDP(EK)

BI-72 BOARD
CN-823 BOARD



DXC-C1(J,UC)
DXC-C1MDP(EK)

B-3

B-4

A

B

C

D

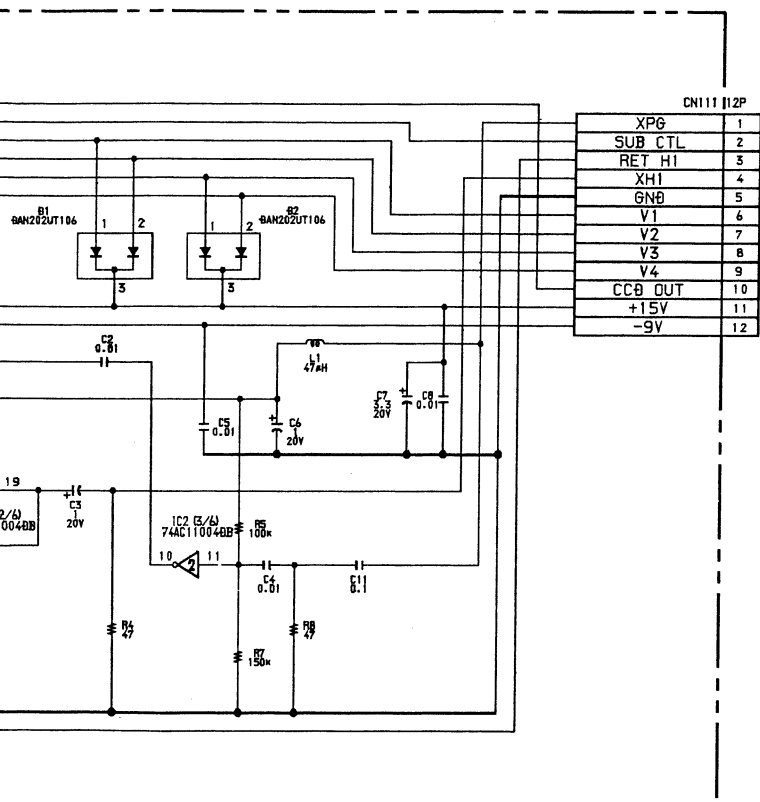
E

F

G

H

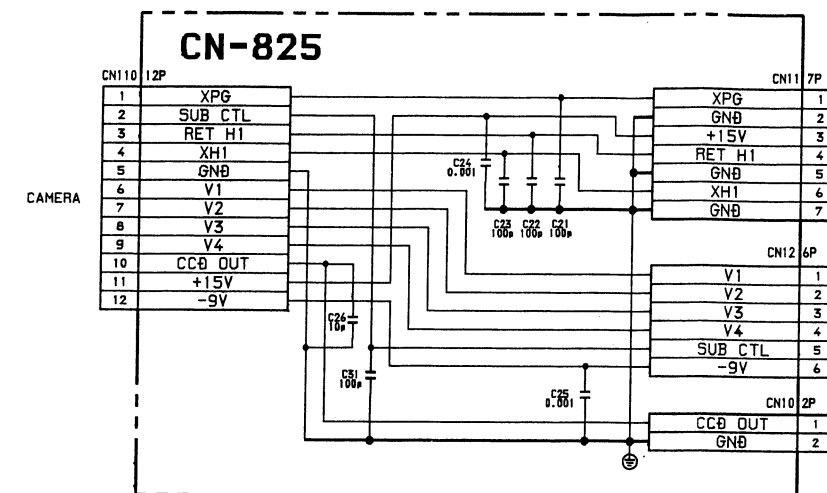
CN-825 BOARD



BI-72 BOARD
CN-823 BOARD

DXC-C1(J,UC)
DXC-C1MDP(EK)

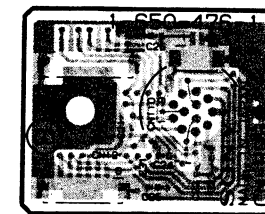
B-7DXC-C1/MDP-B172/M.1



CN-825 BOARD

DXC-C1(J,UC)
DXC-C1MDP(EK)

B-¥DXC-C1/MDP-CN825/M.1



CN-825 -B SIDE-

1-650-476-11

DXC-C1(J,UC)

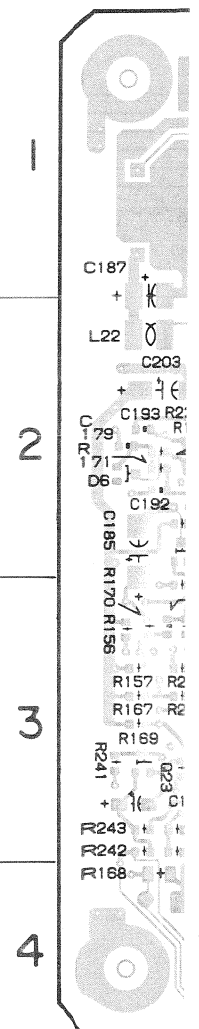
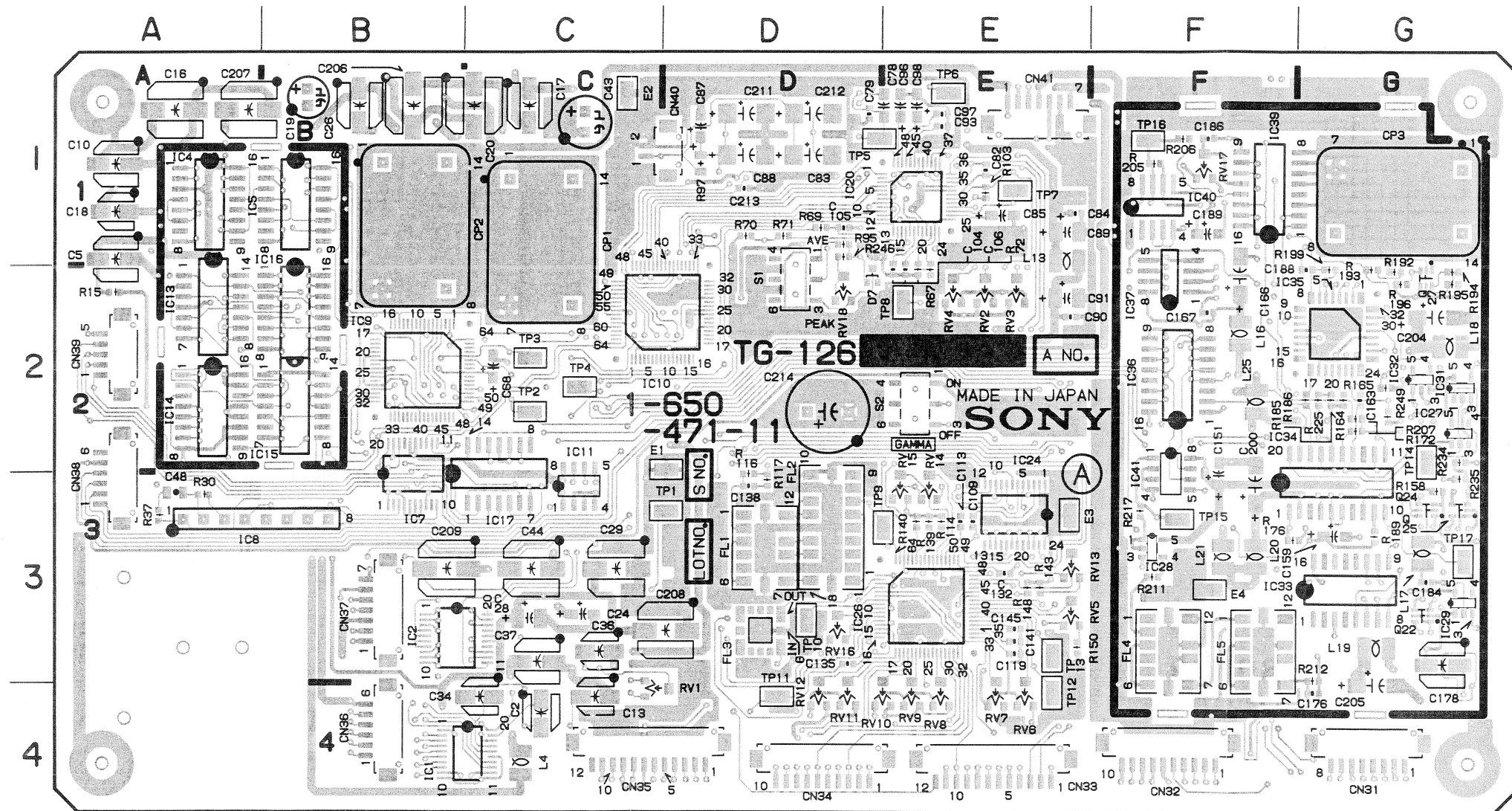
DXC-C1MDP(EK)

TG-126 BOARD

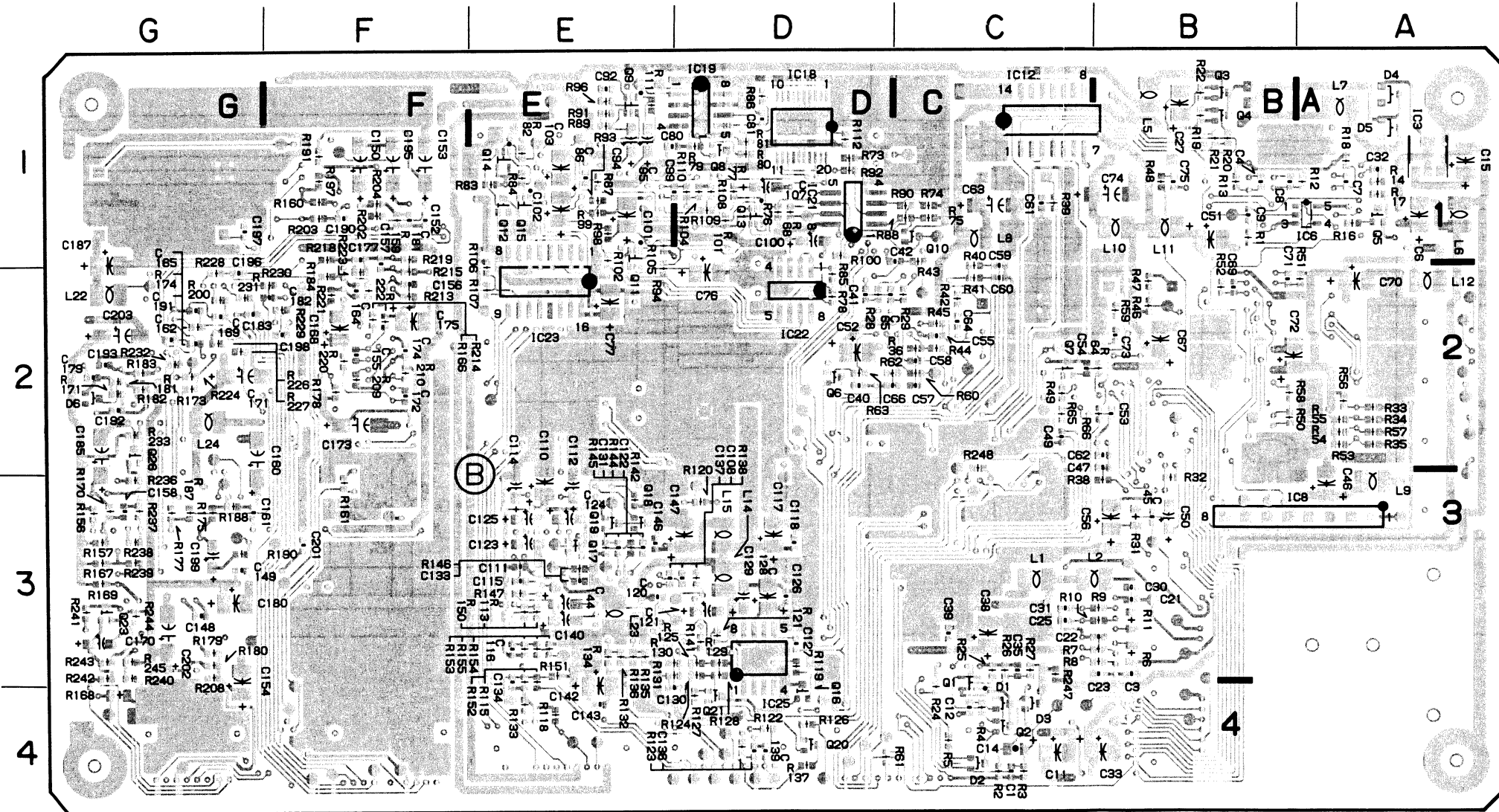
TG-126 1-650-471-11

CN31	G-4	IC26	E-3	RV18	D-2
CN32	F-4	IC27	G-2		
CN33	E-4	IC28	F-3	S1	D-2
CN34	D-4	IC29	G-3	S2	E-2
CN35	C-4	IC31	G-2		
CN36	B-4	IC32	G-2	TP1	D-3
CN37	B-3	IC33	G-3	TP2	C-2
CN38	A-3	IC34	F-3	TP3	C-2
CN39	A-2	IC35	G-2	TP4	C-2
CN40	D-1	IC36	F-2	TP5	E-1
CN41	E-1	IC37	F-2	TP6	E-1
		IC39	G-1	TP7	E-1
CP1	C-1	IC40	F-1	TP8	E-2
CP2	B-1	IC41	F-2	TP9	E-3
CP3	G-1			TP10	D-3
		*Q1	C-3	TP11	D-4
*D1	C-4	*Q2	C-4	TP12	E-4
*D2	C-4	*Q3	B-1	TP13	E-3
*D3	C-4	*Q4	B-1	TP14	G-2
*D4	A-1	*Q5	A-1	TP15	F-3
*D5	A-1	*Q6	D-2	TP16	F-1
*D6	G-2	*Q7	C-2	TP17	G-3
D7	D-2	*Q8	D-1		
		*Q9	E-1		
E1	D-2	*Q10	C-1		
E2	C-1	*Q11	E-1		
E3	E-3	*Q12	E-1		
E4	F-3	*Q13	D-1		
		*Q14	E-1		
FL1	D-3	*Q15	E-1		
FL2	D-3	*Q16	D-4		
FL3	D-3	*Q17	E-3		
FL4	F-3	*Q18	E-3		
FL5	F-3	*Q19	E-3		
		*Q20	D-4		
IC1	B-4	*Q21	D-4		
IC2	B-3	*Q22	G-3		
*IC3	A-1	*Q23	G-3		
IC4	A-1	*Q24	G-3		
IC5	B-1	*Q25	G-3		
*IC6	A-1	*Q26	G-2		
IC7	B-3	*Q27	G-2		
IC8	A-3				
IC9	B-2	RV1	D-4		
IC10	D-2	RV2	E-2		
IC11	C-3	RV3	E-2		
*IC12	C-1	RV4	E-2		
IC13	A-2	RV5	E-3		
IC14	A-2	RV6	E-4		
IC15	B-2	RV7	E-4		
IC16	B-2	RV8	E-4		
IC17	C-3	RV9	E-4		
*IC18	D-1	RV10	E-4		
*IC19	D-1	RV11	D-4		
IC20	E-1	RV12	D-4		
*IC21	D-1	RV13	E-3		
*IC22	D-2	RV14	E-3		
*IC23	E-1	RV15	E-3		
IC24	E-3	RV16	D-3		
*IC25	D-4	RV17	F-1		

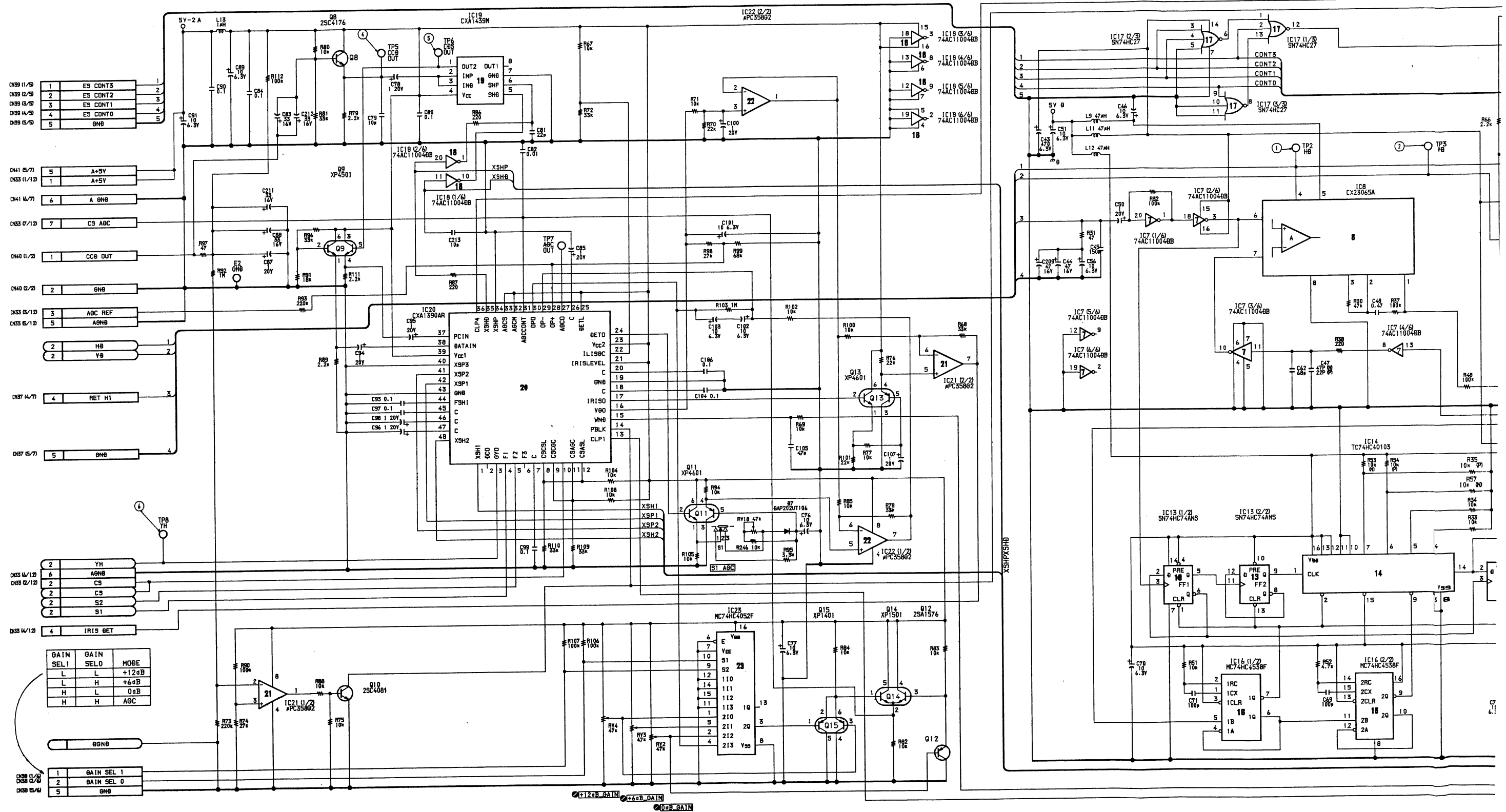
*: B SIDE



TG-126 -A SIDE-
 1-650-471-11
 DXC-C1(J,UC)
 DXC-C1MDP(EK)



TG-126 BOARD(1/2)



DXC-C1(J,U C)
DXC-C1MDP(EK)

B-11

B - 12

A

B

C

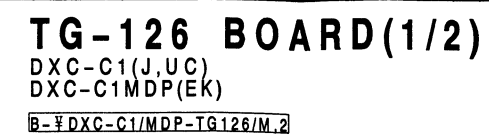
D

E

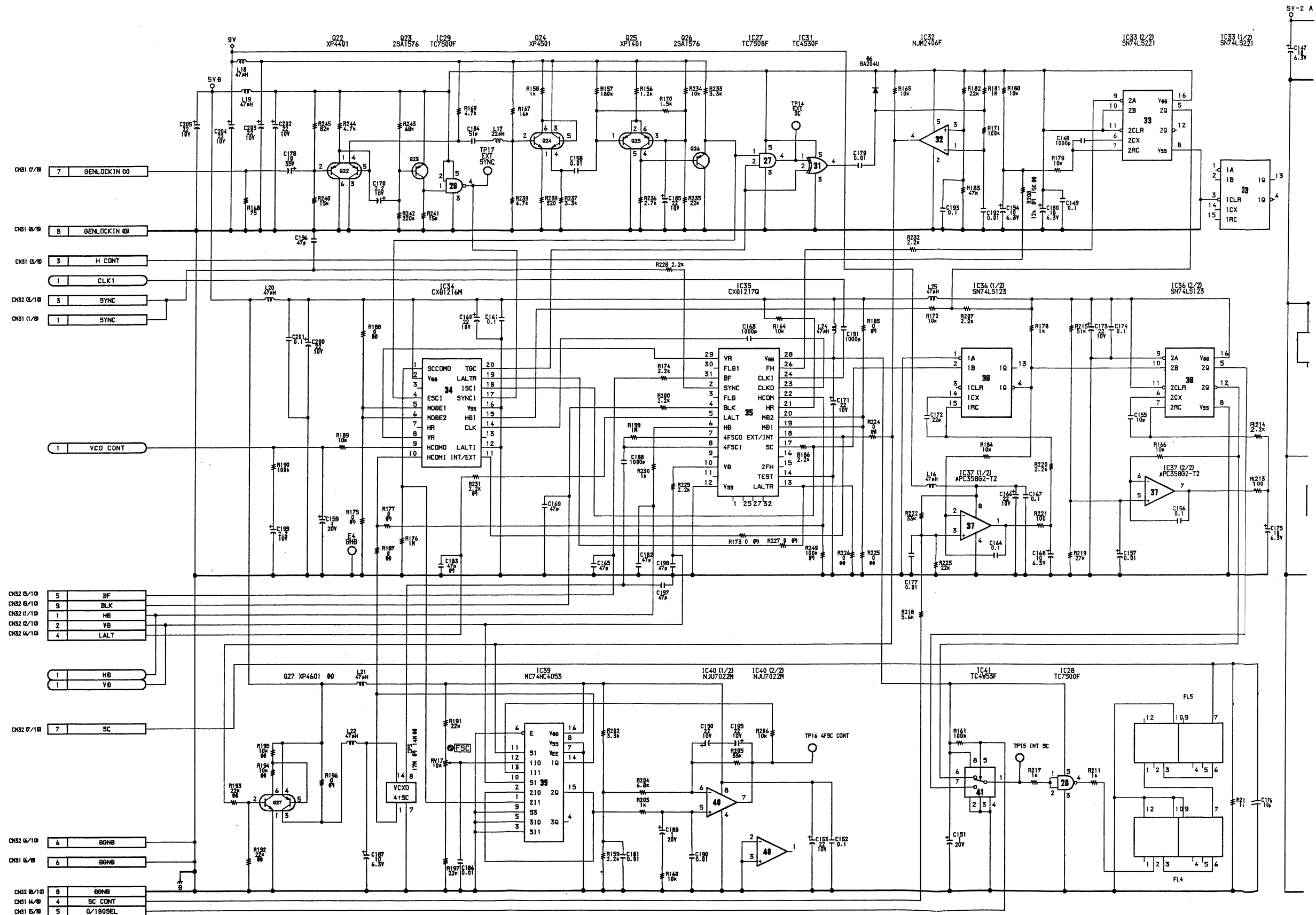
F

6

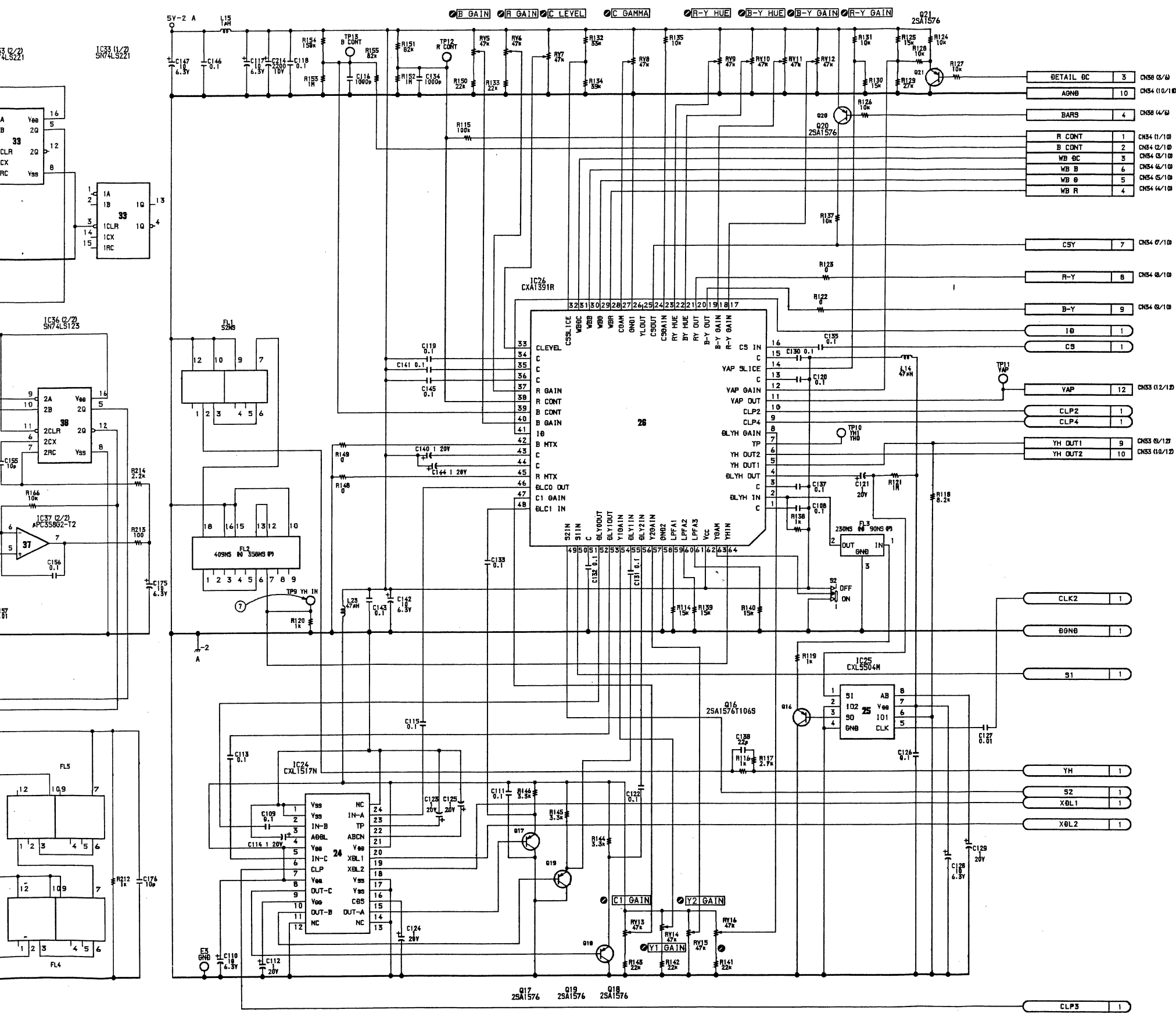
"



TG-126 BOARD(2/2)



DXC-C1(J,UC)
DXC-C1MDP(EK)



TG-126 BOARD(2/2)

DXC-C1(J,U,C)
DXC-C1MDP(EK)

B-#DXC-C1/MDP-TG126/M.5

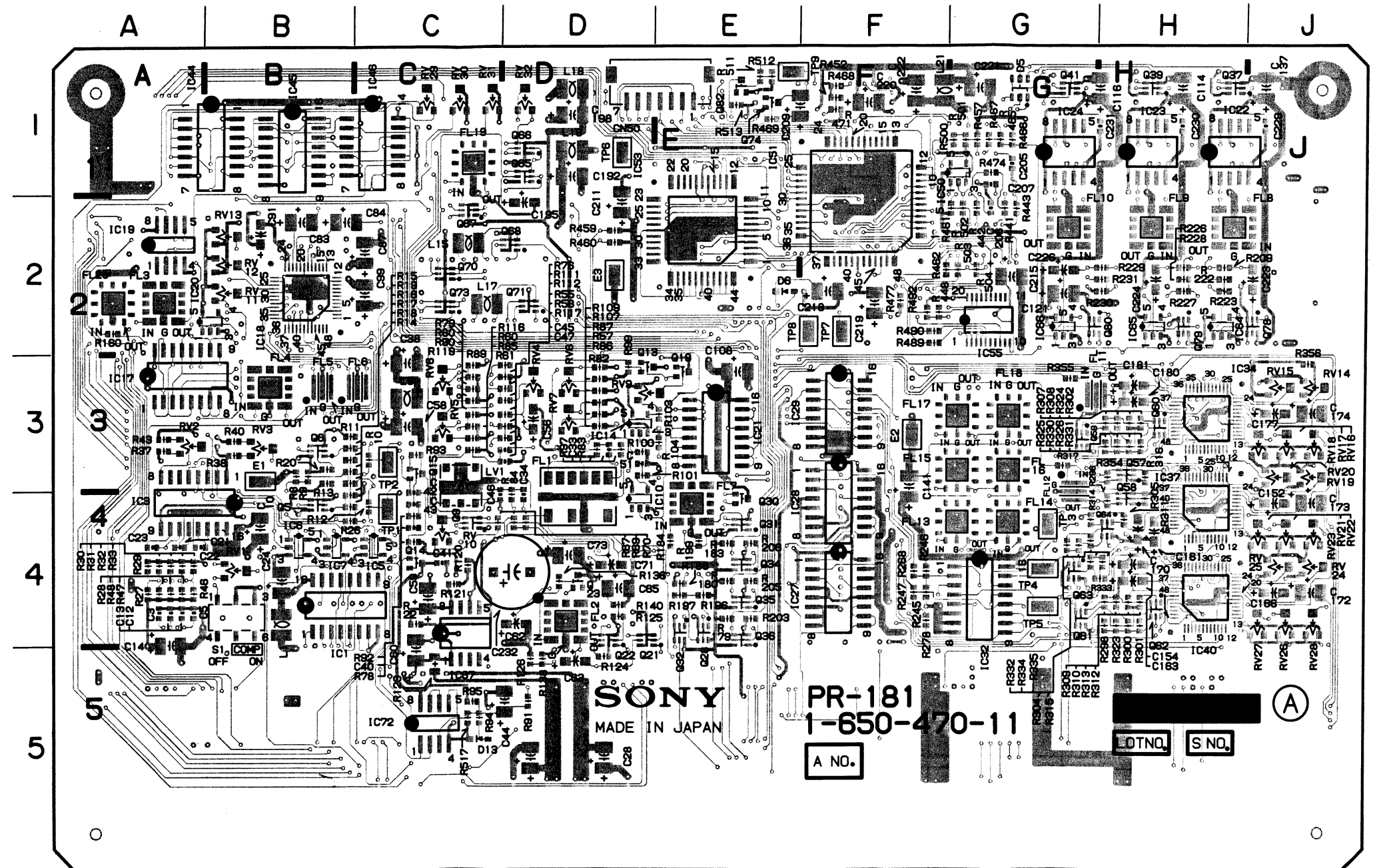
PR-181 BOARD

PR-181 1-650-470-11

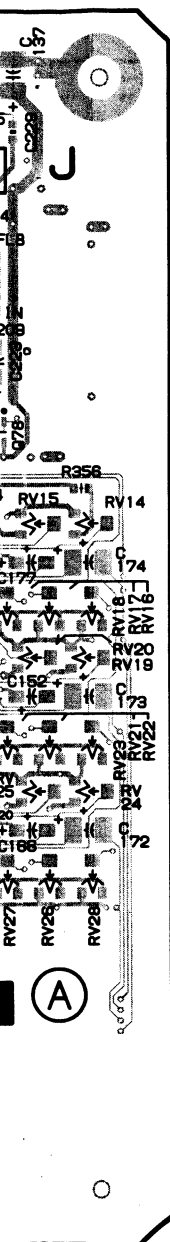
*CN43	H-5	IC19	A-2	*Q7	B-4	Q70	C-2
*CN44	G-5	IC20	B-2	*Q8	C-3	Q71	D-2
*CN45	D-5	IC21	E-3	Q9	C-4	*Q72	D-2
*CN46	B-5	IC22	H-1	*Q10	C-3	Q73	C-2
*CN47	A-5	IC23	H-1	*Q11	D-3	Q74	E-1
*CN48	A-4	IC24	G-1	*Q12	D-3	*Q75	F-1
*CN49	A-3	*IC25	H-2	Q13	D-3	*Q76	F-1
CN50	E-1	*IC26	H-2	Q14	C-4	*Q77	F-2
		*IC27	F-4	Q15	C-3	Q78	J-2
*D3	B-1	IC28	F-3	*Q16	C-3	Q79	H-2
*D4	B-1	IC29	F-3	*Q17	D-3	Q80	G-2
D5	G-1	*IC30	F-3	*Q18	D-3	*Q81	F-1
D6	E-2	*IC31	F-3	Q19	E-3	Q82	E-1
*D7	F-1	IC32	G-4	*Q20	D-3		
*D8	F-1	*IC33	H-4	Q21	D-4	RV1	B-4
*D10	E-1	IC34	H-3	Q22	D-4	RV2	A-3
*D11	E-1	*IC35	J-3	Q23	D-4	RV3	B-3
*D12	F-2	*IC36	J-3	*Q24	B-2	RV4	D-3
D13	C-5	IC37	H-4	*Q25	B-3	RV5	C-3
		*IC38	J-4	*Q26	A-3	RV6	C-3
E1	B-3	*IC39	J-4	*Q27	A-2	RV7	D-3
E2	F-3	IC40	H-4	Q28	E-4	RV8	D-3
E3	D-2	*IC41	J-4	*Q29	E-4	RV9	D-3
		*IC42	J-4	Q30	E-4	RV10	C-4
FL1	D-4	*IC43	J-4	Q31	E-4	RV11	B-2
FL2	D-4	IC44	A-1	Q32	E-4	RV12	B-2
FL3	A-2	IC45	B-1	Q34	E-4	RV13	B-2
FL4	B-3	IC46	B-1	Q35	E-4	RV14	J-3
FL5	B-3	*IC47	G-1	Q36	E-4	RV15	J-3
FL6	C-3	*IC48	G-2	Q37	H-1	RV16	J-3
FL7	E-4	*IC49	G-2	*Q38	J-1	RV17	J-3
FL8	H-2	IC50	G-1	Q39	H-1	RV18	J-3
FL9	H-2	IC51	F-2	*Q40	H-1	RV19	J-3
FL10	G-2	*IC52	E-2	Q41	G-1	RV20	J-3
FL11	G-3	IC53	E-2	*Q42	G-1	RV21	J-4
FL12	G-3	*IC54	E-2	*Q43	E-4	RV22	J-4
FL13	G-4	IC55	G-2	*Q44	E-4	RV23	J-4
FL14	G-4	*IC56	F-1	*Q45	F-4	RV24	J-4
FL15	G-3	*IC57	F-1	*Q46	F-4	RV25	J-4
FL16	G-3	*IC58	E-1	*Q47	F-4	RV26	J-4
FL17	G-3	*IC59	E-1	*Q48	F-3	RV27	J-4
FL18	G-3	*IC60	E-1	*Q49	F-3	RV28	J-4
FL19	C-1	*IC61	E-1	*Q50	F-4	RV29	C-1
FL20	A-2	*IC62	D-1	*Q51	F-3	RV30	C-1
		*IC63	E-1	*Q52	F-4	RV31	C-1
IC1	B-4	IC64	H-2	*Q53	F-3	RV32	D-1
*IC2	A-4	IC65	H-2	*Q54	F-3		
IC3	B-3	IC66	G-2	*Q55	F-3	S1	B-4
*IC4	A-3	IC67	C-5	*Q56	H-3		
IC5	C-4	*IC68	C-4	Q57	H-3	TP1	C-4
IC6	B-4	*IC69	G-4	Q58	H-4	TP2	C-3
IC7	B-4	*IC70	F-4	Q59	G-3	TP3	G-4
*IC8	C-4	IC72	C-5	Q60	H-3	TP4	G-4
*IC9	C-4			Q61	G-4	TP5	G-4
IC10	D-4	LV1	C-3	Q62	H-4	TP6	D-1
*IC12	D-3			Q63	G-4	TP7	F-2
*IC13	D-4	*Q1	C-4	Q64	H-4	TP8	F-2
IC14	D-3	*Q2	B-4	Q65	D-1	TP9	E-1
*IC15	D-4	*Q3	B-4	Q66	D-1		
*IC16	A-2	*Q4	A-4	Q67	C-2		
IC17	A-3	Q5	B-4	Q68	D-2		
IC18	B-2	Q6	B-3	*Q69	D-2		

*; B SIDE

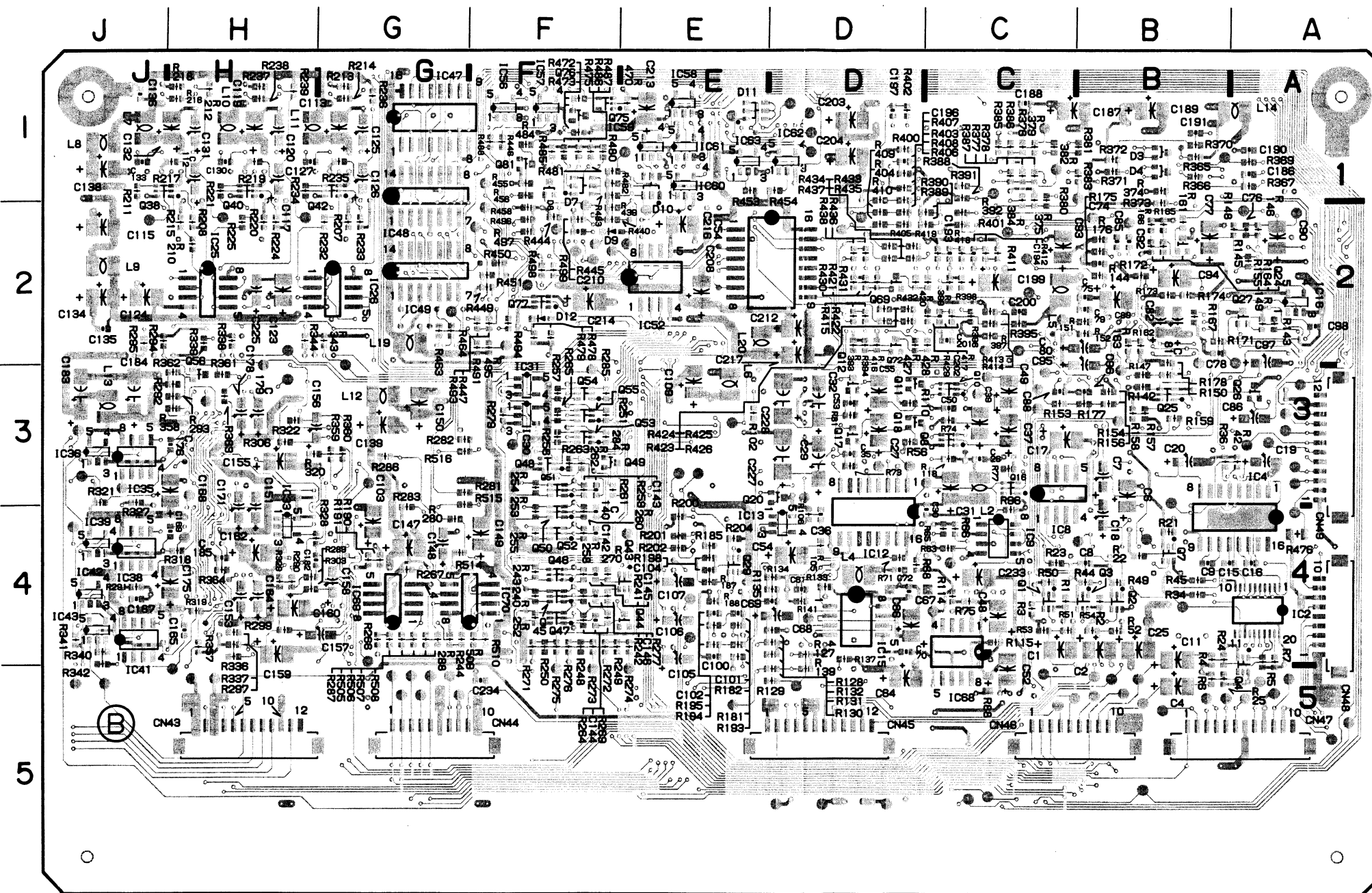
B-23



PR-181 -A SIDE-
 1-650-470-11
 DXC-C1(J,UC)
 DXC-C1MDP(EK)



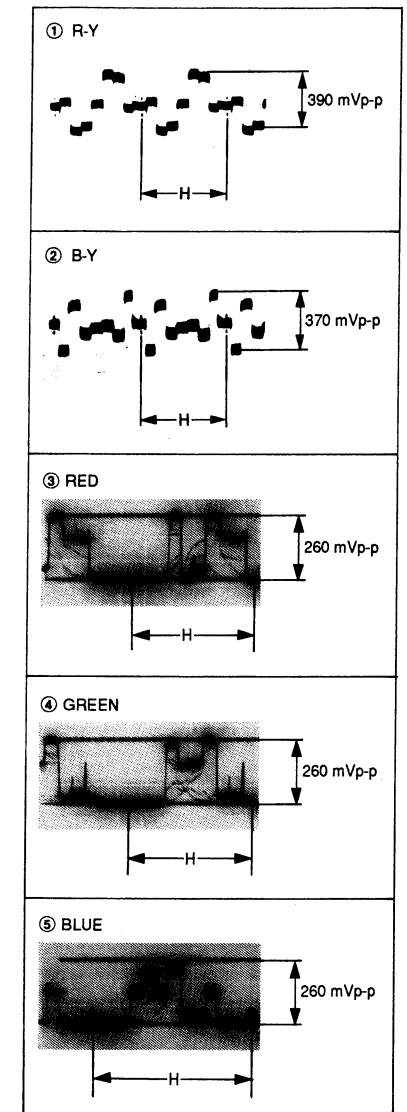
-A SIDE-

11
C)
EK)

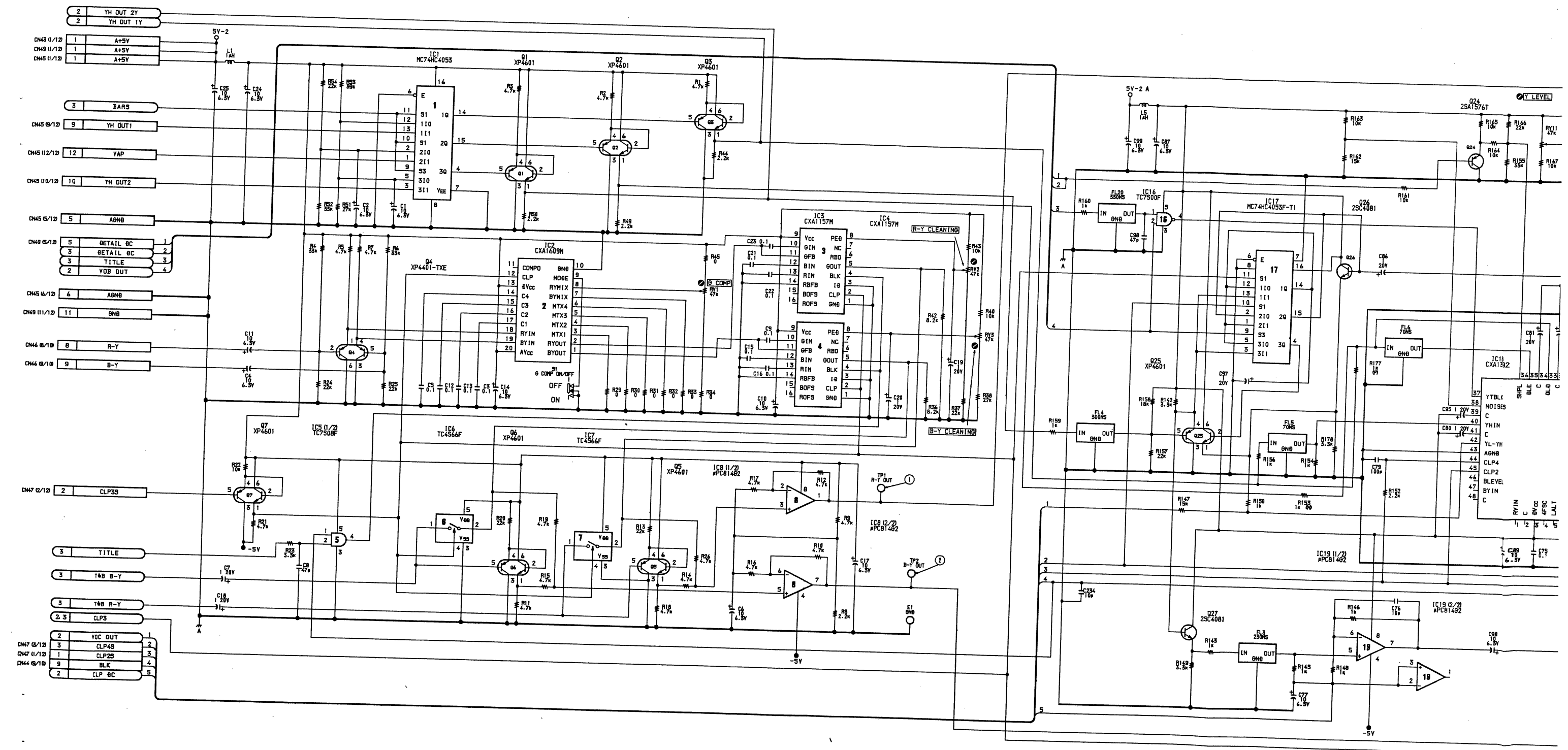
PR-181 -B SIDE-

1-650-470-11
DXC-C1(J,U,C)
DXC-C1MDP(EK)

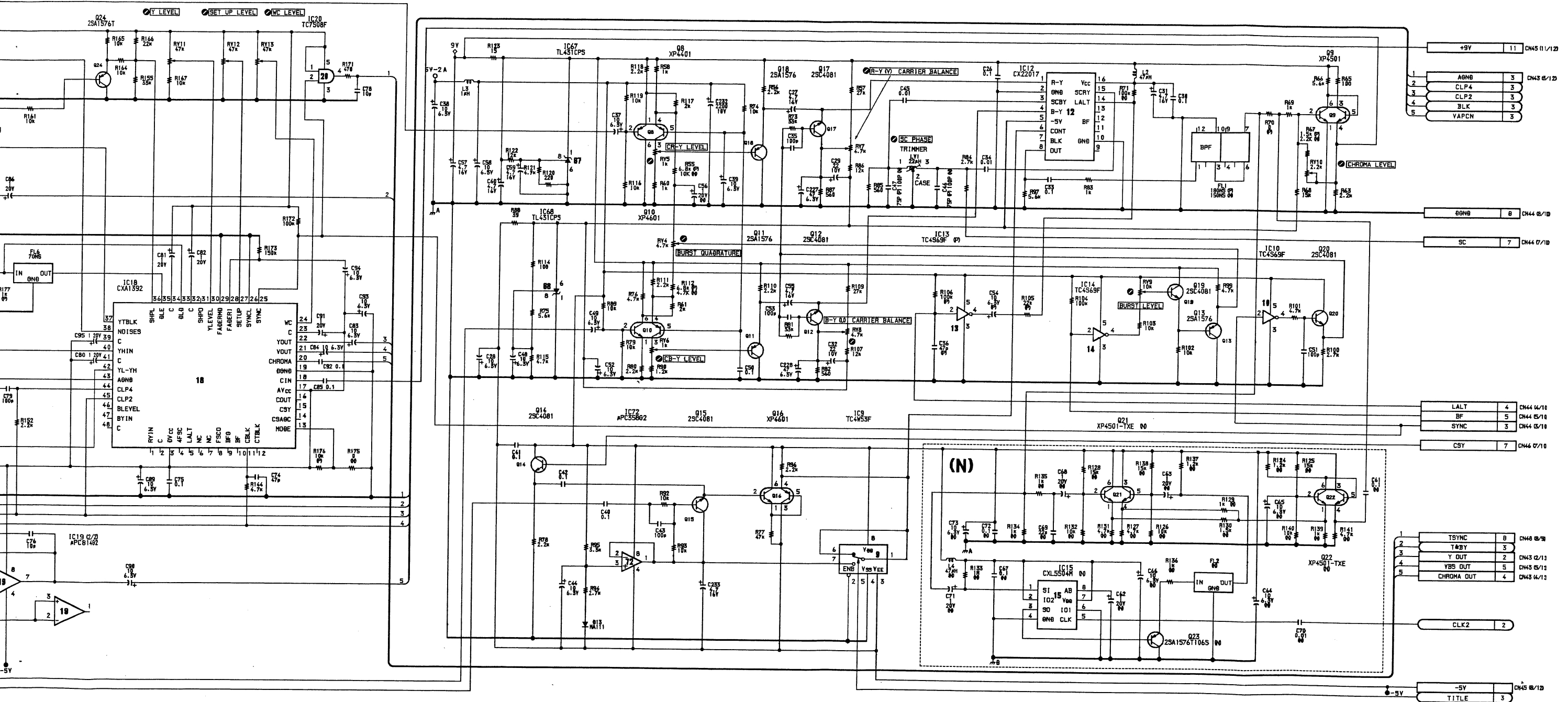
Waveform PR-181



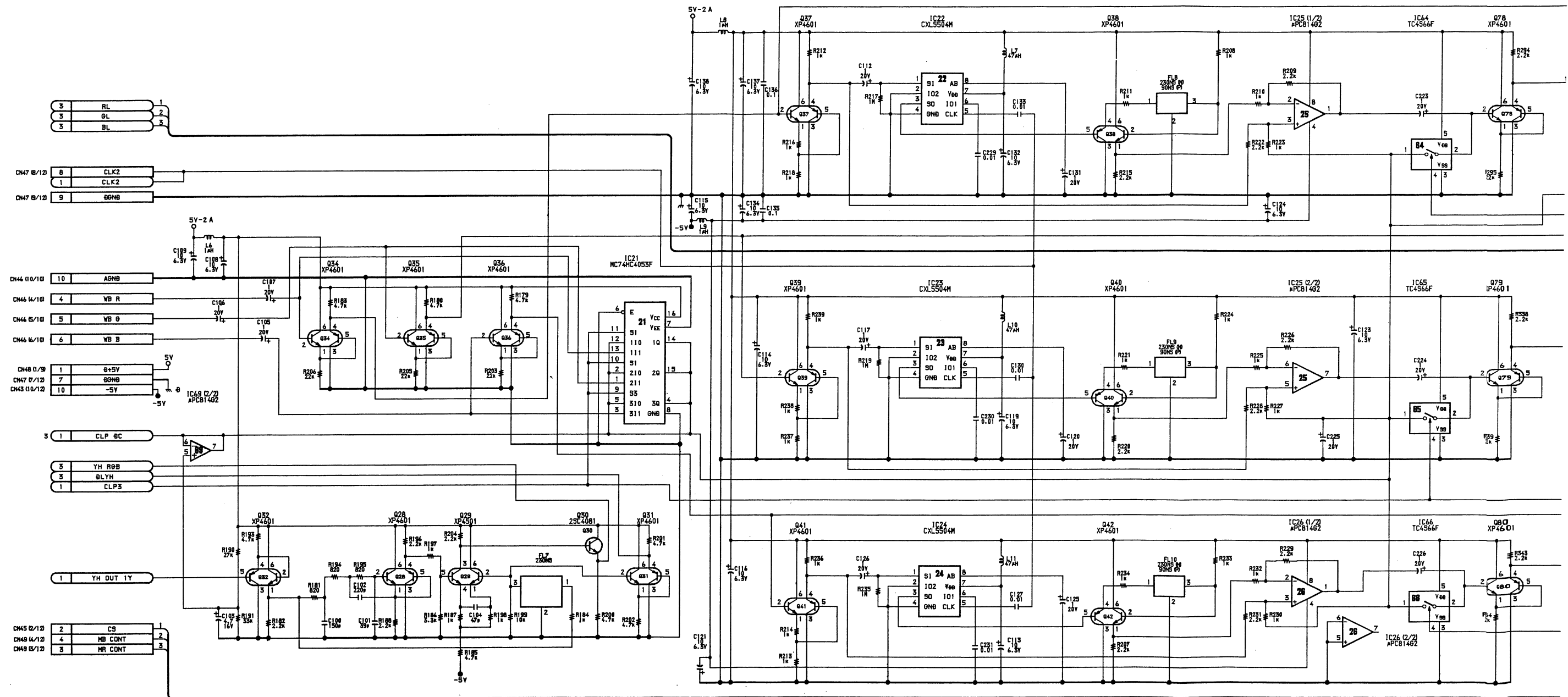
PR-181 BOARD(1/3)

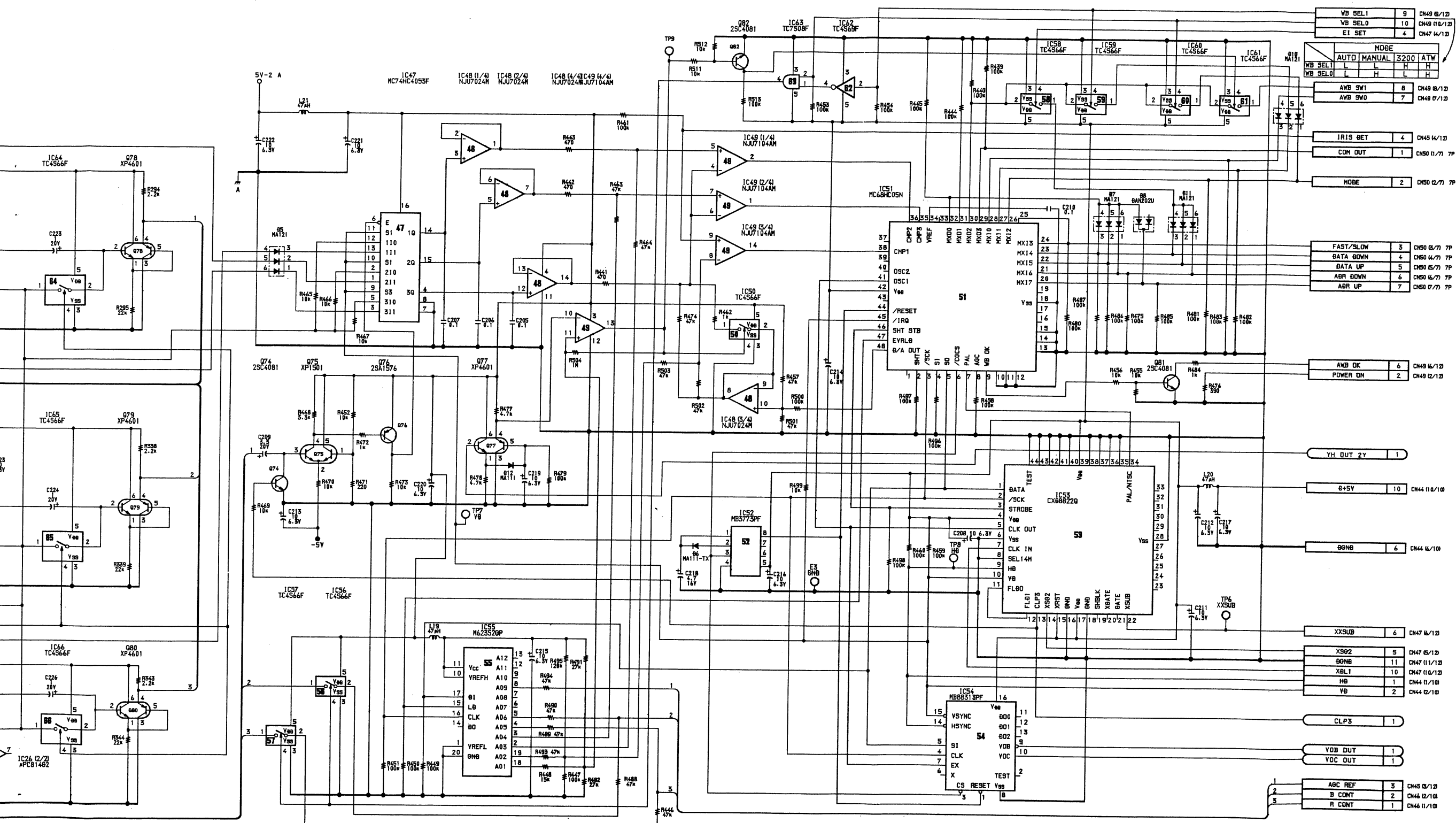


DXC-C1(J,UC)
DXC-C1MDP(EK)



PR-181 BOARD(2/3)



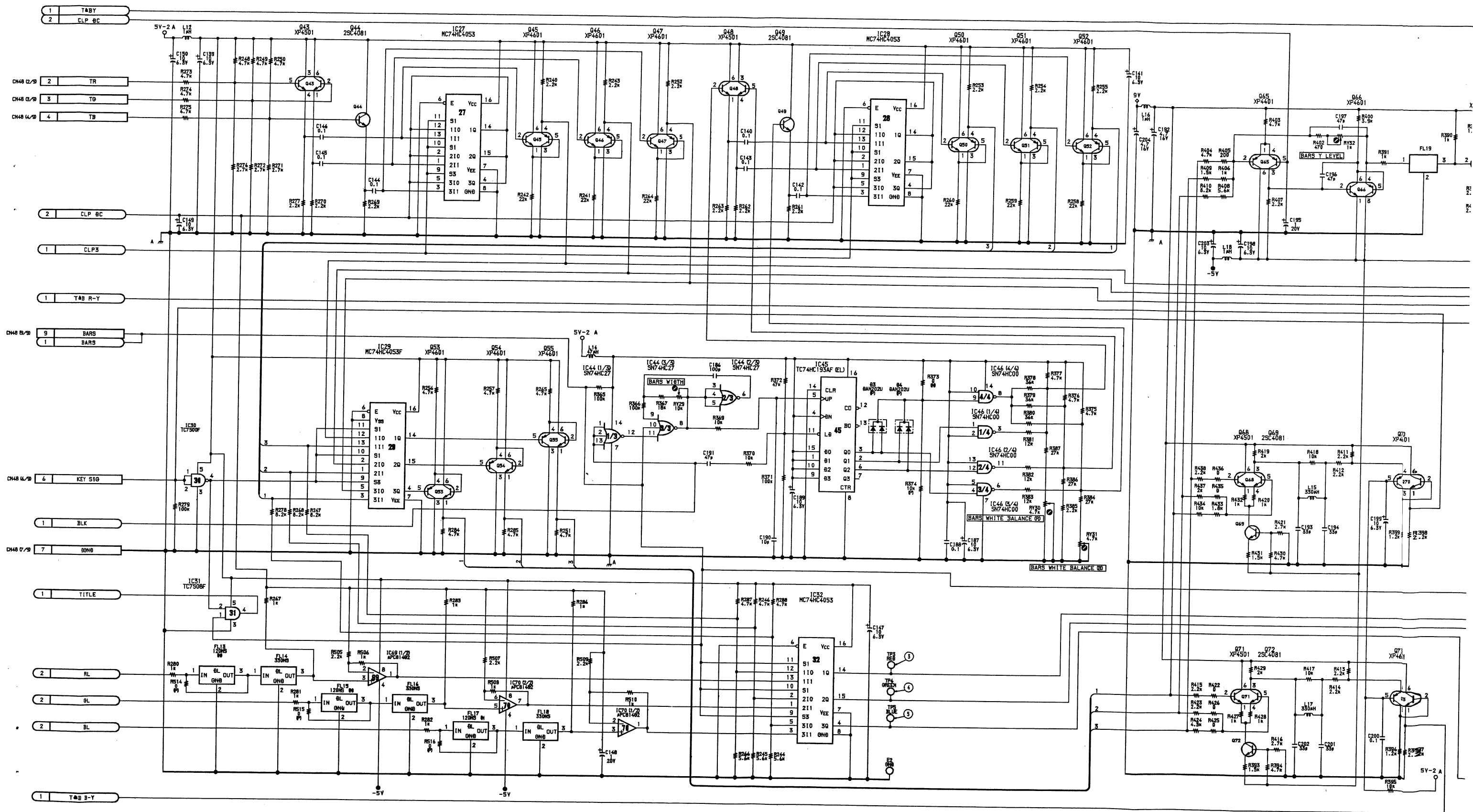


PR-181 BOARD (2/3)

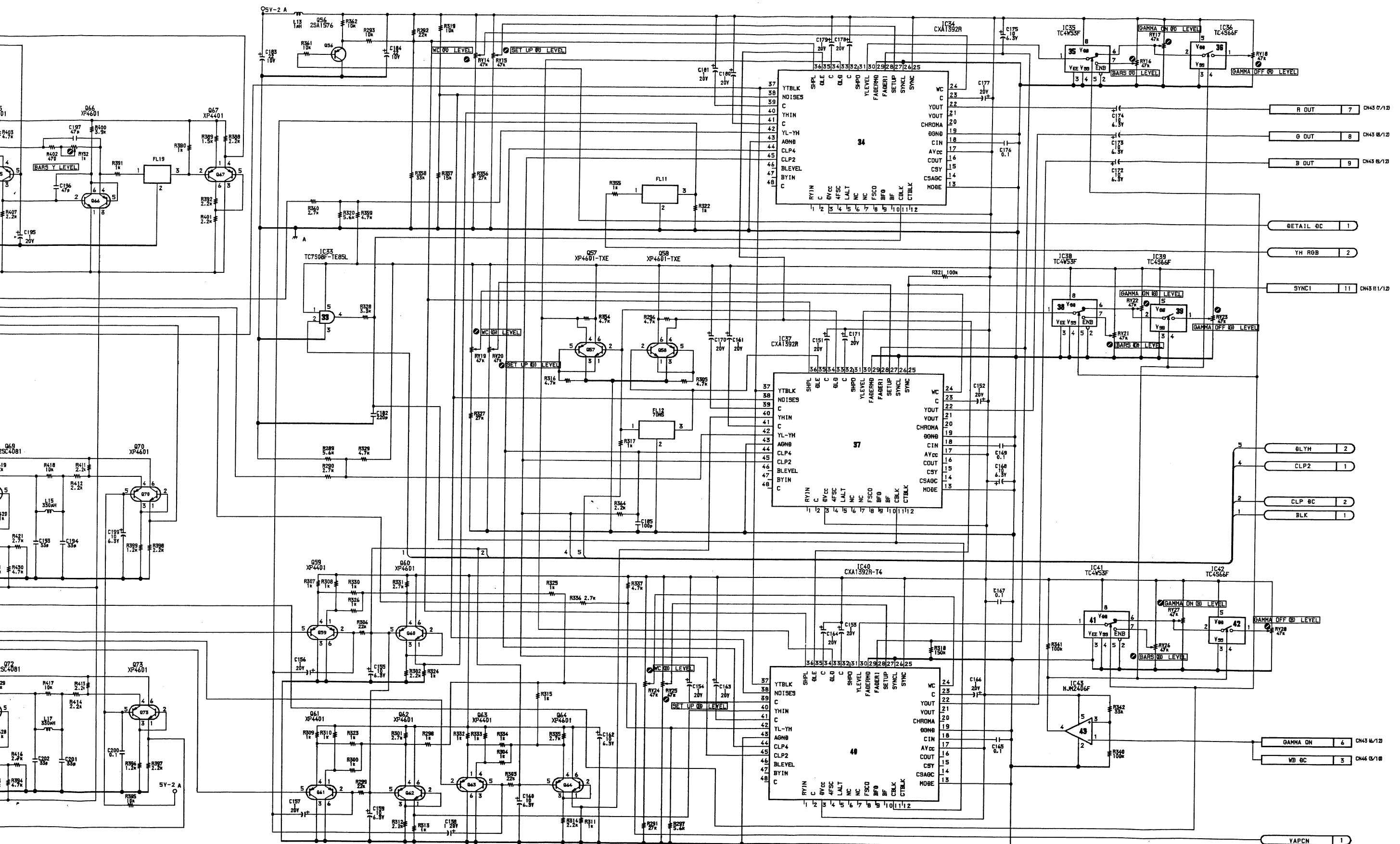
DXC-C1(J,UC)
DXC-C1MDP(EK)

B-7DXC-C1/MDP-PR181/M.5

PR-181 BOARD(3/3)



DXC-C1(J,UC)
DXC-C1MDP(EK)

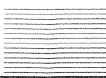


PR-181 BOARD(3/3)

DXC-C1(J,UC)
DXC-C1MDP(EK)

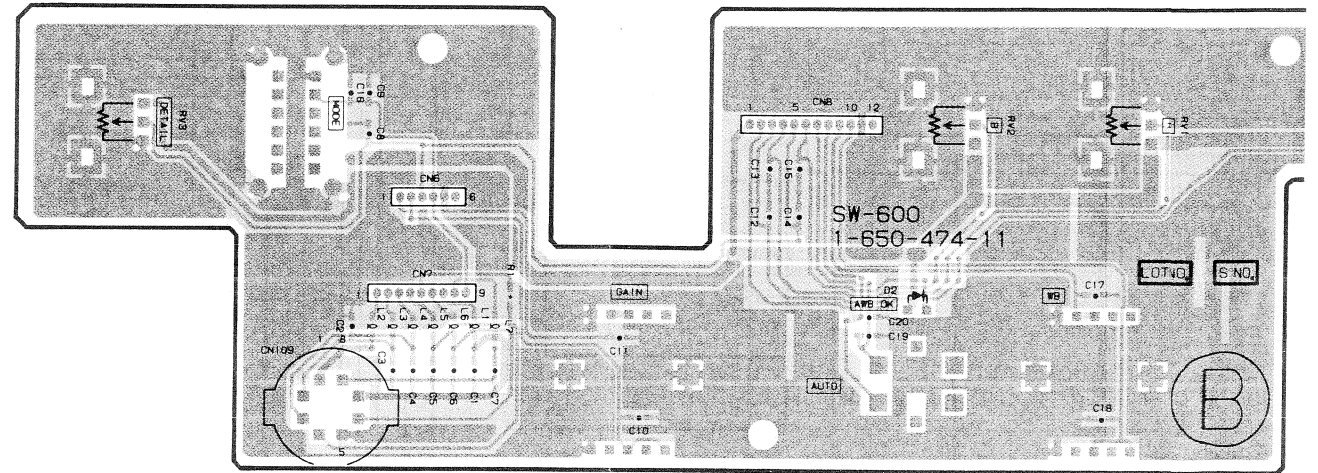
B-7 DXC-C1/MDP-PR181/M.7

SW-600

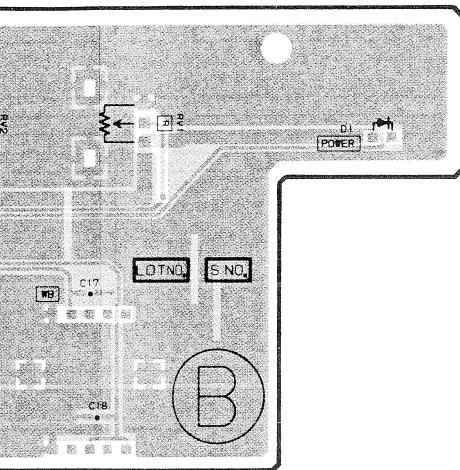


SW-600

SW-600 BOARD



SW-600
1-650-474-
DXC-C1(J,U
DIC-C1MDP

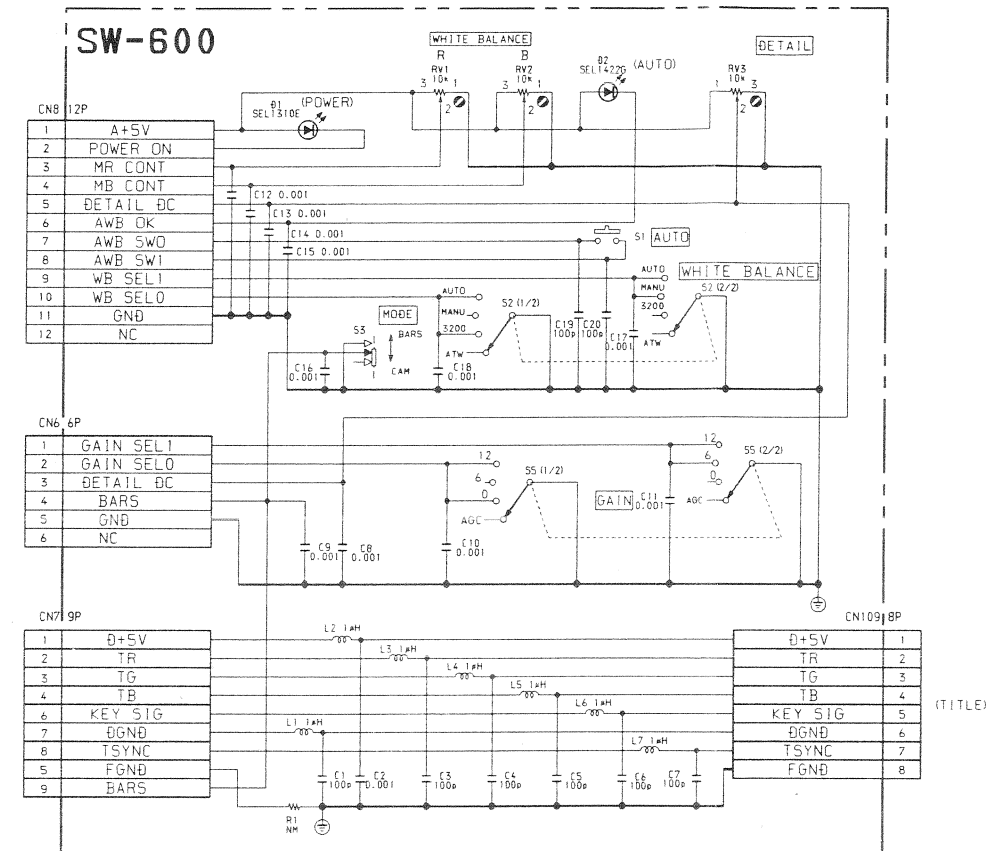


SW-600 -B SIDE-

1-650-474-11

DXC-C1(J,UC)

DXC-C1MDP(EK)



SW-600 BOARD

DXC-C1(J,UC)

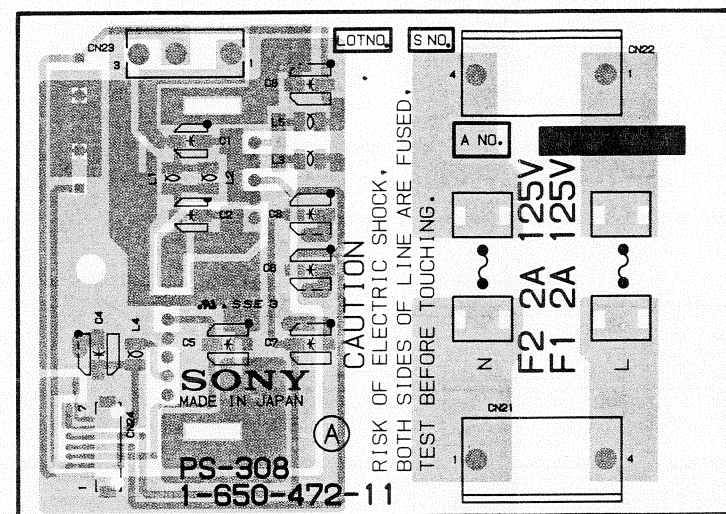
DXC-C1MDP(EK)

B-¥DXC-C1/MDP-SW600/M.1

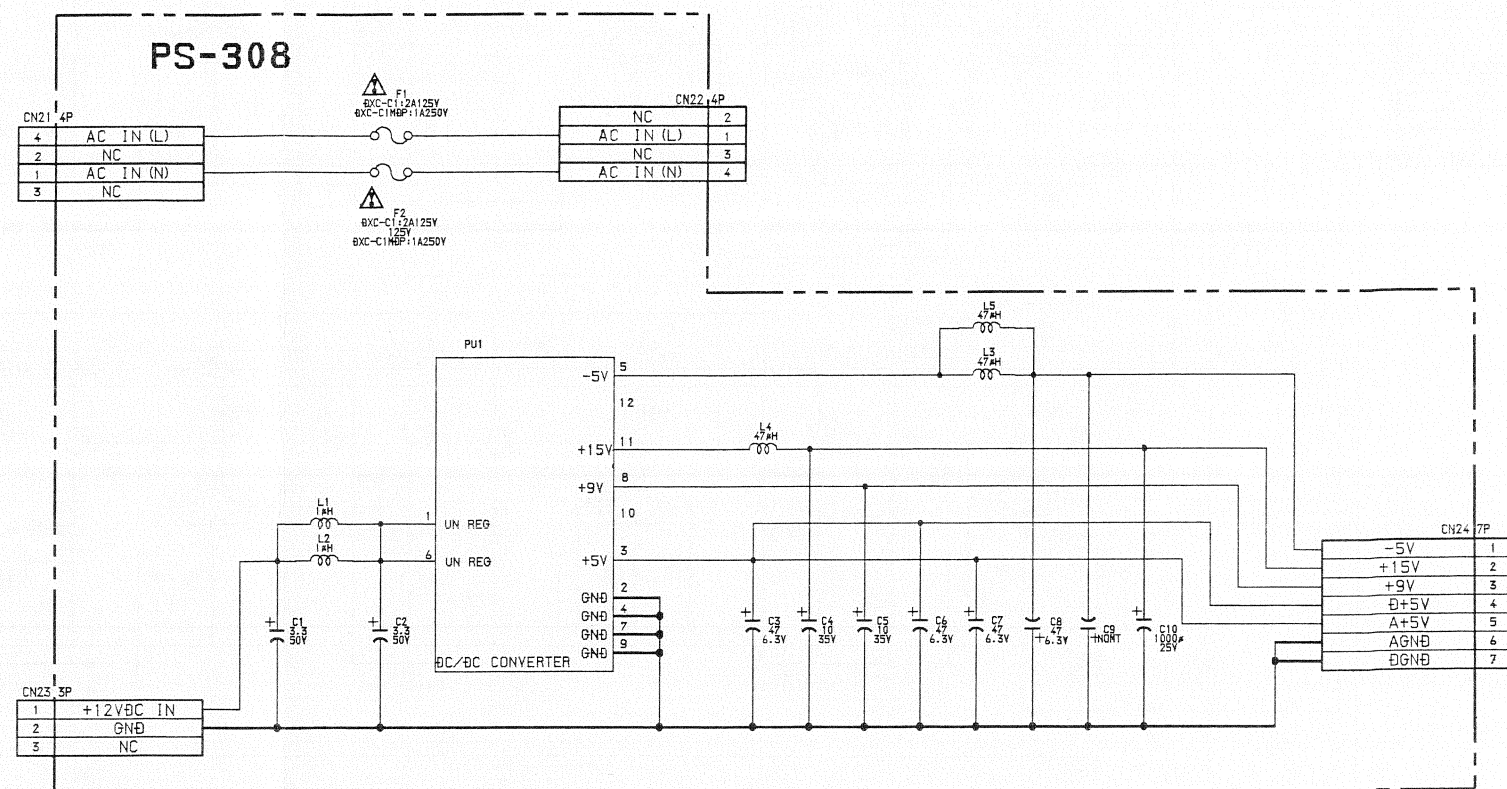
DXC-C1(J,UC)

DXC-C1MDP(EK)

PS-308 BOARD

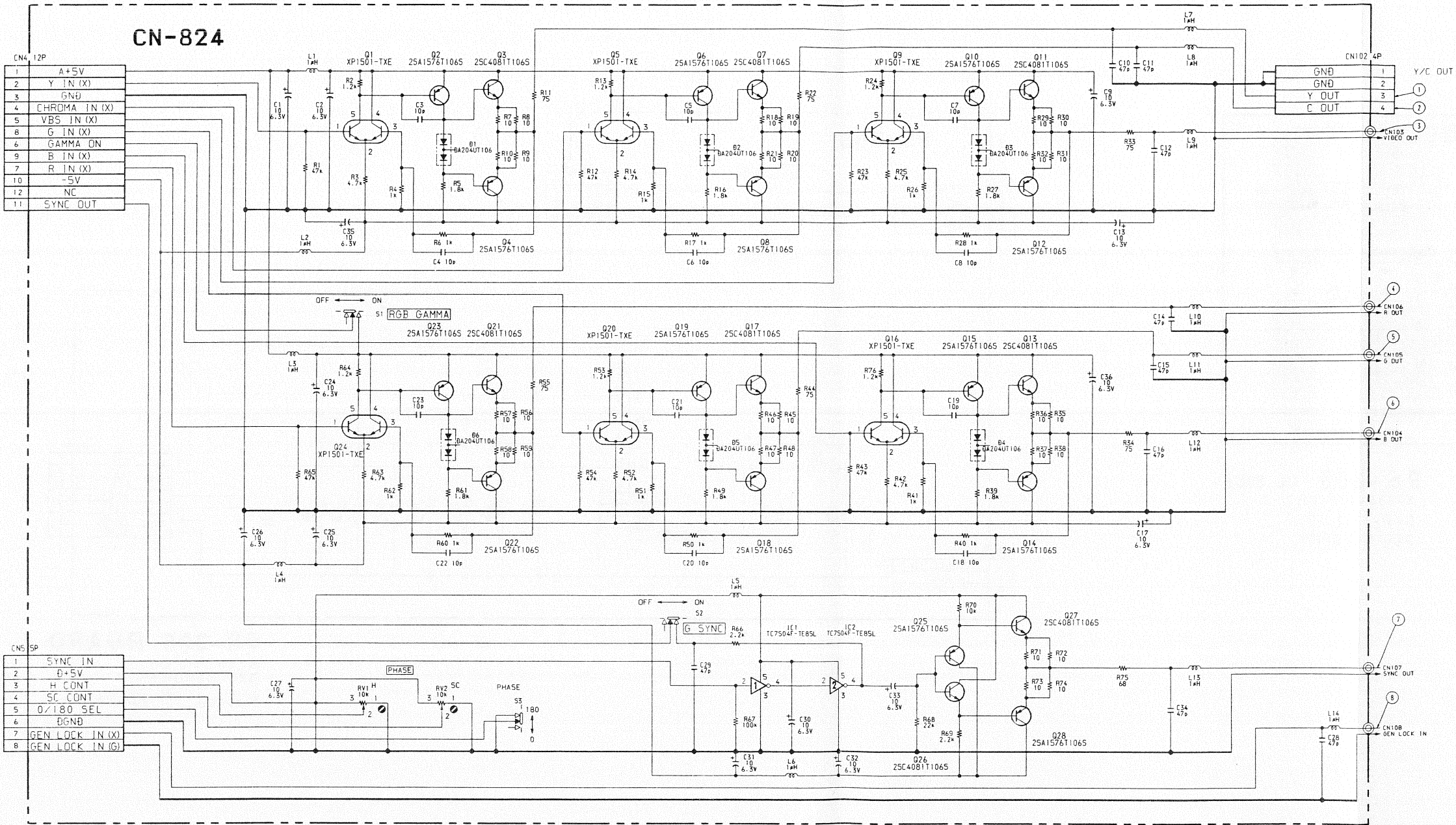


PS-308 -A SIDE-
 1-650-472-11
 DXC-C1(J,UC)
 DXC-C1MDP(EK)



PS-308 BOARD
 DXC-C1(J,UC)
 DXC-C1MDP(EK)
 B-ΨDXC-C1/MDP-PS308/M.1

CN-824 BOARD



CN-824 BOARD
DXC-C1(J,U,C)
DXC-C1MDP(EK)
B-#DXC-C1/MDP-CN824/M.1

DXC-C1(J,U,C)
DXC-C1MDP(EK)

B-47

B-48

A

B

C

D

E

F

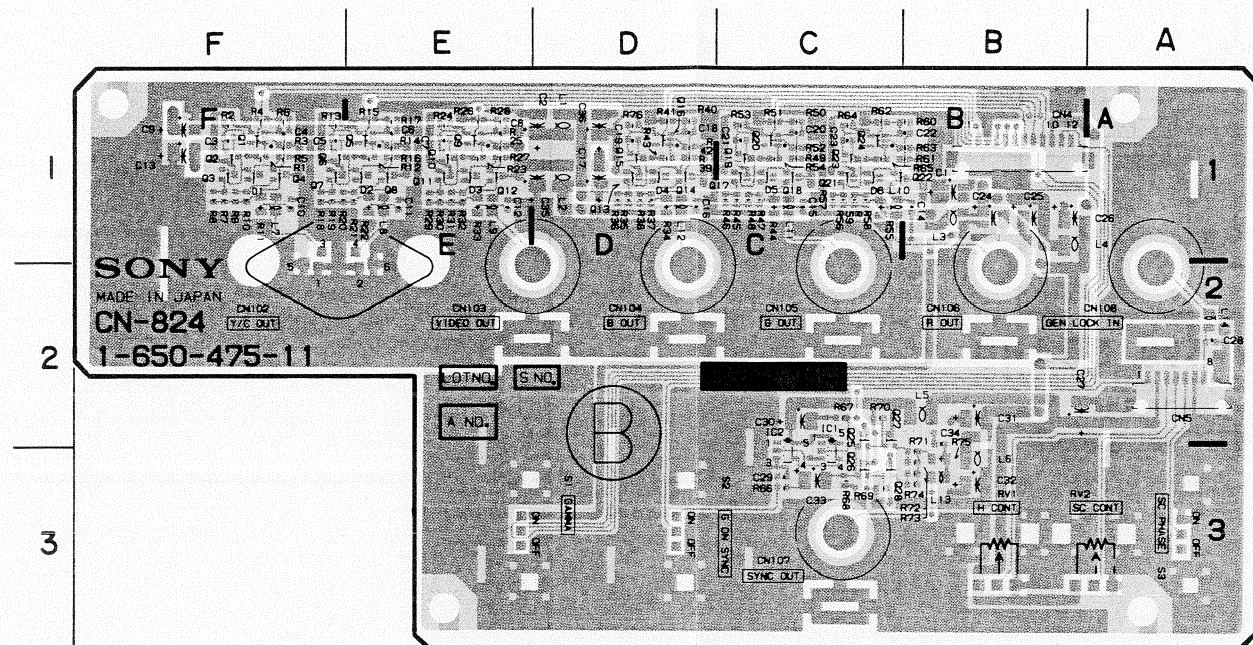
G

H

CN-824 1-650-475-11

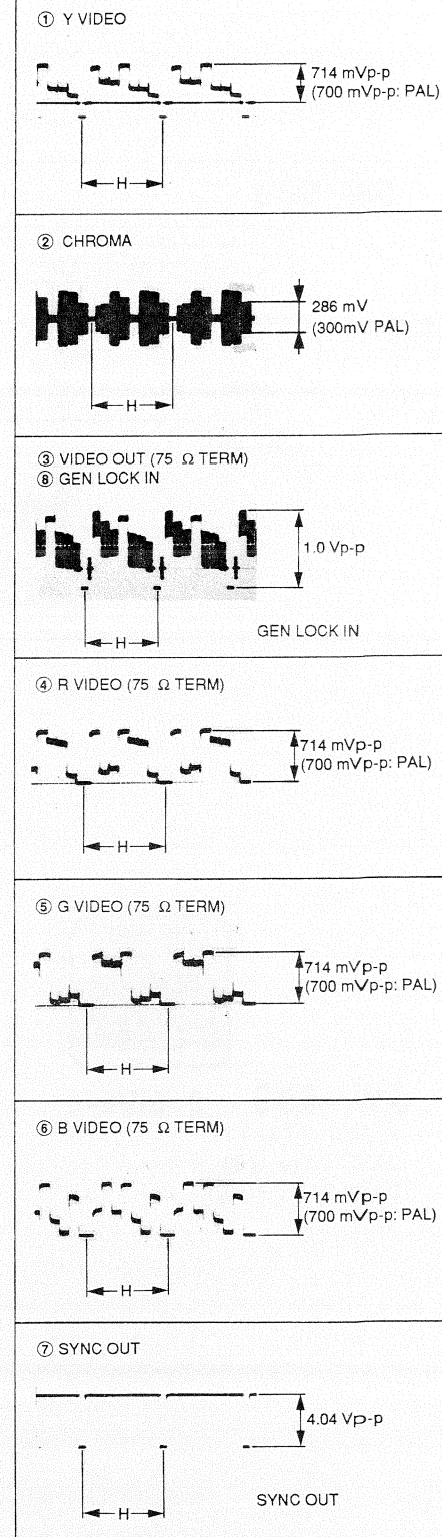
CN-824 BOARD

*CN4	B-1	*Q16	D-1
*CN5	A-2	*Q17	C-1
		*Q18	C-1
*D1	F-1	*Q19	C-1
*D2	E-1	*Q20	C-1
*D3	E-1	*Q21	C-1
*D4	D-1	*Q22	C-1
*D5	C-1	*Q23	C-1
*D6	C-1	*Q24	C-1
		*Q25	C-2
*IC1	C-3	*Q26	C-3
*IC2	C-3	*Q27	C-2
		*Q28	C-3
*Q1	F-1		
*Q2	F-1	RV1	B-3
*Q3	F-1	RV2	A-3
*Q4	F-1		
*Q5	E-1	S1	E-3
*Q6	F-1	S2	D-3
*Q7	F-1	S3	A-3
*Q8	E-1		
*Q9	E-1	*: B SIDE	
*Q10	E-1		
*Q11	E-1		
*Q12	E-1		
*Q13	D-1		
*Q14	D-1		
*Q15	D-1		

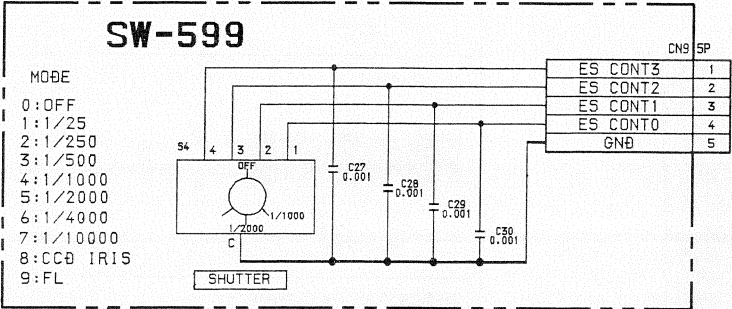


CN-824 -B SIDE-
 1-650-475-11
 DXC-C1(J,UC)
 DXC-C1MDP(EK)

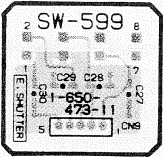
Waveform CN-824



SW-599 BOARD



SW-599 BOARD
DXC-C1(J,UC)
DXC-C1MDP(EK)
B-¥DXC-C1/MDP-SW599/M.1



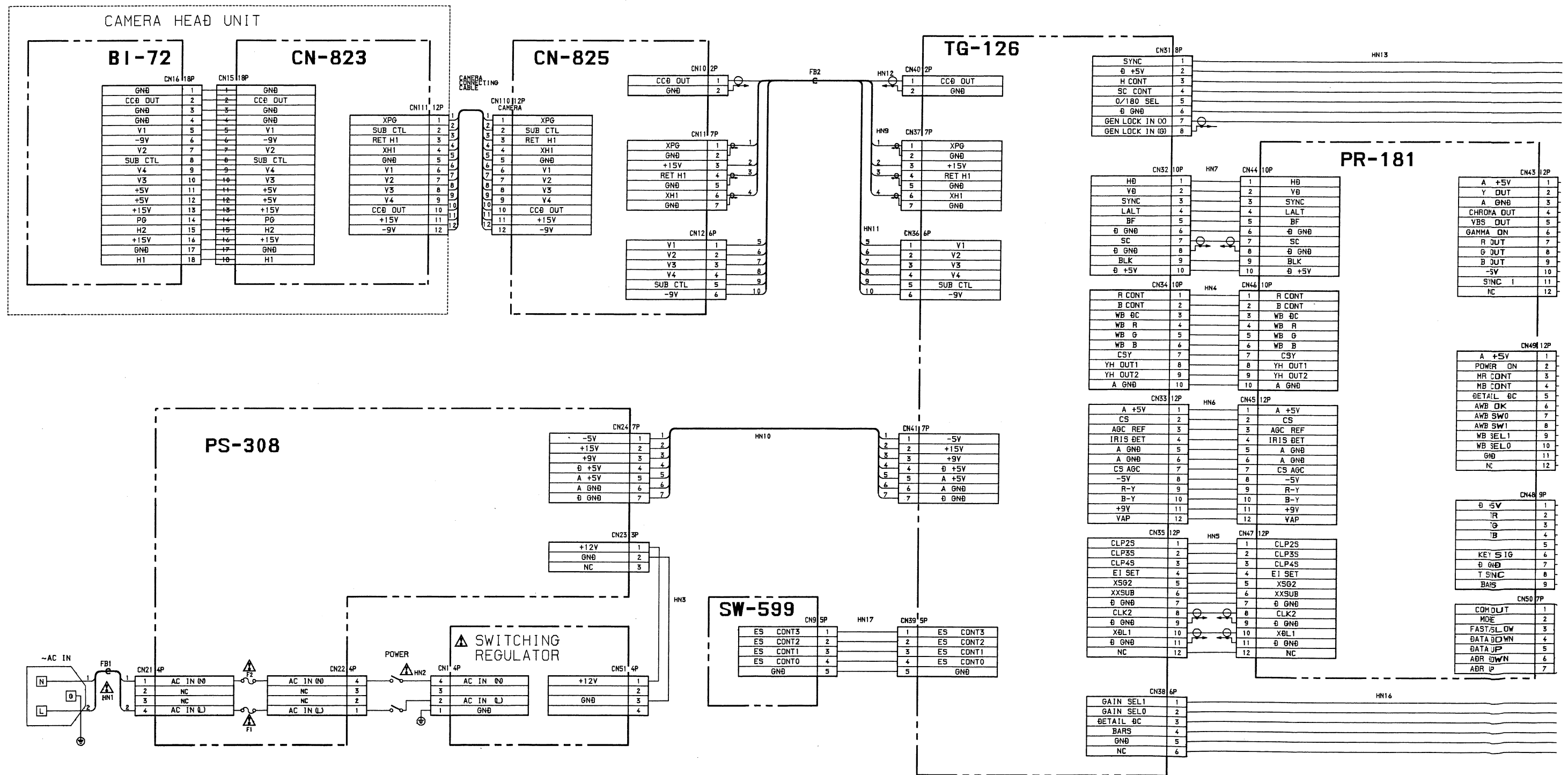
SW-599 -B SIDE-
1-650-473-11
DXC-C1(J,UC)
DXC-C1MDP(EK)

DXC-C1(J,UC)
DXC-C1MDP(EK)

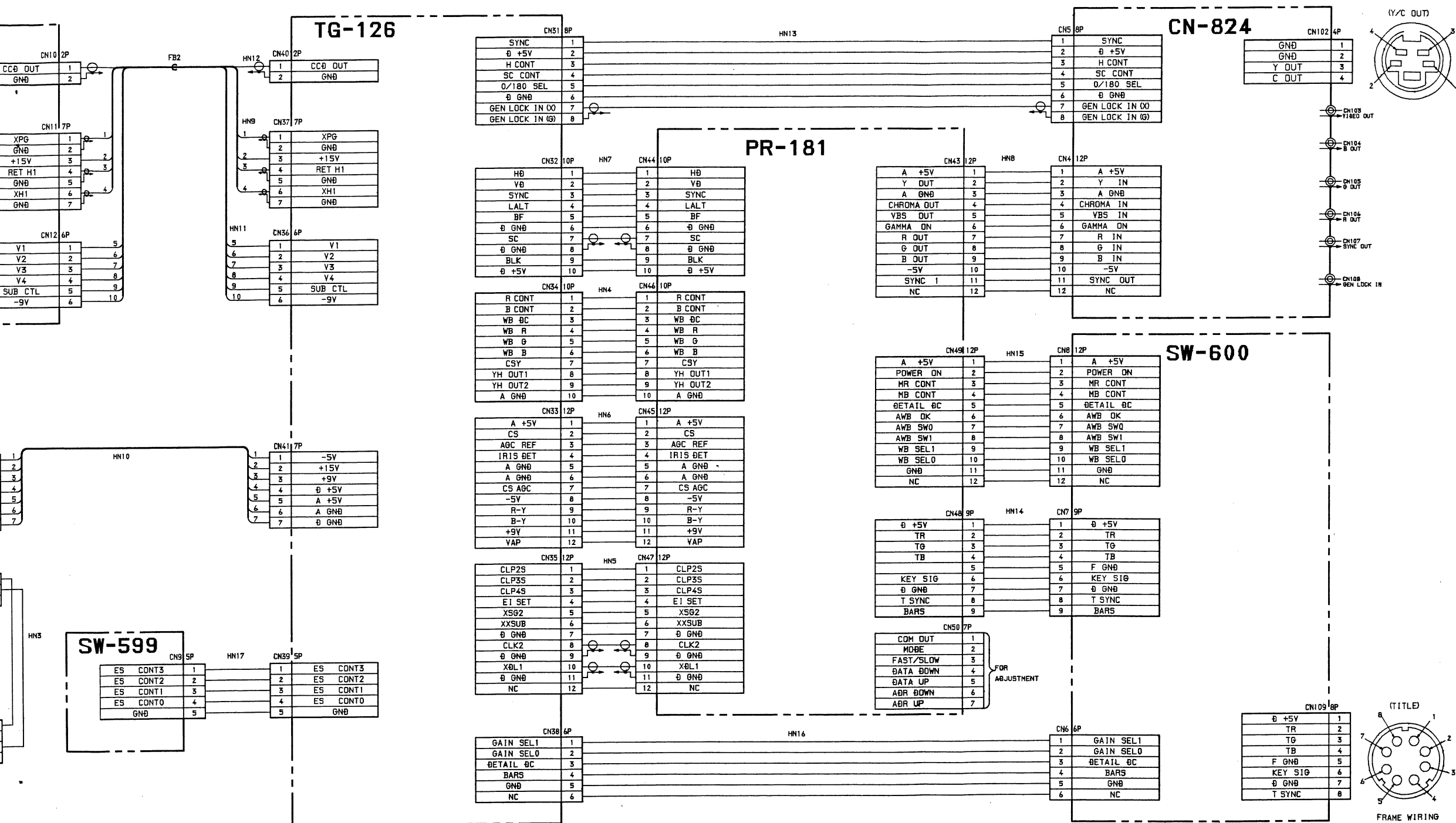
B-43

B-44

FRAME WIRING



DXC-C1(J,UC)
DXC-C1MDP(EK)



SECTION C

SEMICONDUCTOR

等価回路はICメーカーのData Bookに従いました。

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

TYPE PAGE

Tr. Di

2SA1576	C-2
2SA1610	C-2
2SC1623	C-2
2SC4081	C-2
2SC4176	C-2
DA204U	C-2
DAN202U	C-2
DAP202U	C-2
MA111	C-2
MA121	C-2
RB400D	C-2
SEL1310E	C-2
SEL1422G	C-2
TLG114A	C-2
XP1401	C-2
XP1501	C-2
XP4401	C-2
XP4501	C-2
XP4601	C-2

TYPE PAGE

IC

74AC11004DB	C-3
CX22017	C-3
CX23065A	C-3
CXA1157M	C-3
CXA1390AR	C-4
CXA1391R	C-5
CXA1392R	C-6
CXA1439M	C-7
CXA1609N	C-16
CXD1216M	C-7
CXD1217Q	C-8
CXD1250N	C-7
CXD1252AR	C-10
CXD8822Q	C-12
CXL1517N	C-9
CXL5504M	C-11
ICX038BNA	C-11
ICX039BNA	C-11
M62352GP	C-13
MB3773PF	C-14
MB88313PF	C-14
MC68HC05N4	C-13
MC74HC4052F	C-14
MC74HC4053F	C-15
MC74HC4538AF	C-15
NJM2406F	C-15
NJM79L09UA	C-15
NJU7022M	C-15
NJU7024M	C-15
NJU7104AM	C-16
SC7S00F	C-17
SC7S04F	C-17
SN74HC00ANS	C-16
SN74HC04ANS	C-16
SN74HC27ANS	C-16
SN74HC74ANS	C-16
SN74LS123NS	C-17
SN74LS221NS	C-17

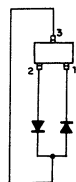
TYPE PAGE

IC

TC4S30F	C-17
TC4S66F	C-17
TC4S69F	C-17
TC4W53F	C-18
TC74HC193AF	C-18
TC74HC40103AF	C-18
TC7S00F	C-17
TC7S04F	C-17
TC7S08F	C-17
TL431CPS	C-18
UPC358G2	C-18
UPC814G2-1	C-18

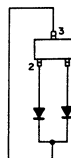
DIODE, TRANSISTOR

(SCALE 4/1)
TOP VIEW



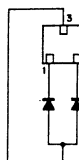
DA204U

(SCALE 4/1)
TOP VIEW



DAN202U

TOP VIEW (SCALE 4/1)



DAP202U

(SCALE 4/1)
TOP VIEW



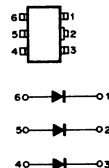
RB400D

(SCALE 6/1)
TOP VIEW

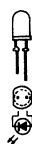


MA111

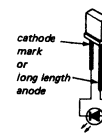
(SCALE 6/1)
TOP VIEW



MA121

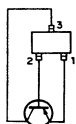


SEL1310E ; GREEN
TLG114A ; GREEN



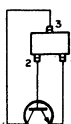
SEL1422G ; GREEN

(SCALE 4/1)
TOP VIEW



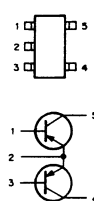
2SA1576
2SA1610

(SCALE 4/1)
TOP VIEW



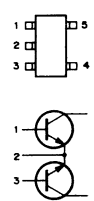
2SC1623
2SC4081
2SC4176

(SCALE 6/1)
TOP VIEW



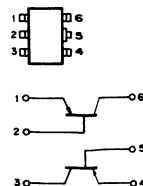
XP1401

(SCALE 6/1)
TOP VIEW



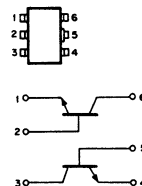
XP1501

(SCALE 6/1)
TOP VIEW



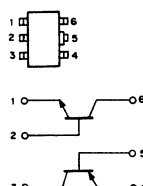
XP4401

(SCALE 6/1)
TOP VIEW



XP4501

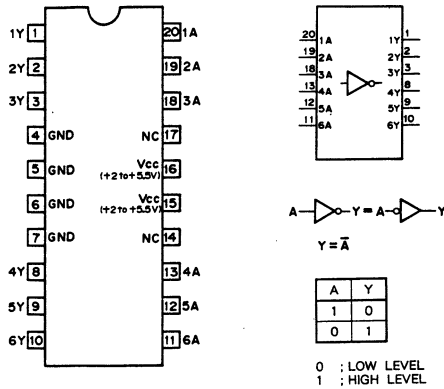
(SCALE 6/1)
TOP VIEW



XP4601

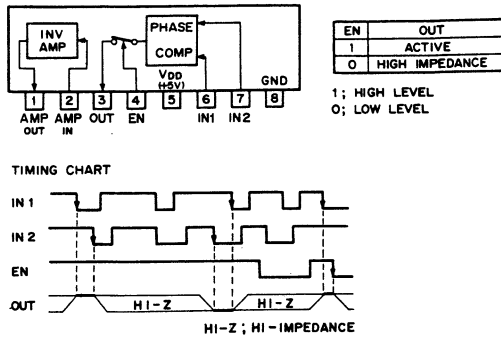
74AC11004DB (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
- TOP VIEW -



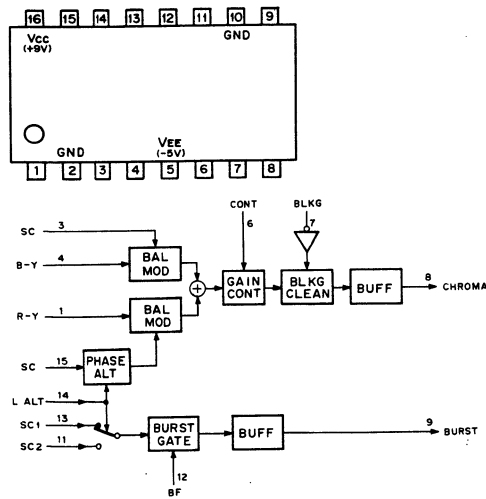
CX23065A (SONY)

N-MOS PHASE COMPARATOR WITH INVERSION AMPLIFIER
- PRINTED SIDE VIEW -



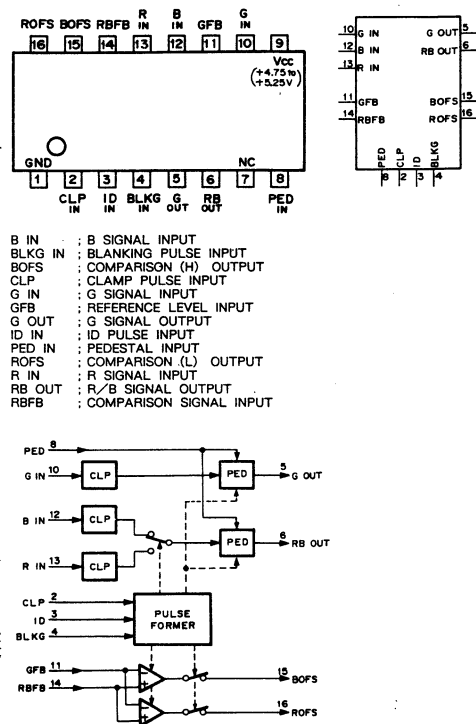
CX22017 (SONY)

VIDEO SIGNAL PROCESSOR
- TOP VIEW -



CXA1157M (SONY) FLAT PACKAGE

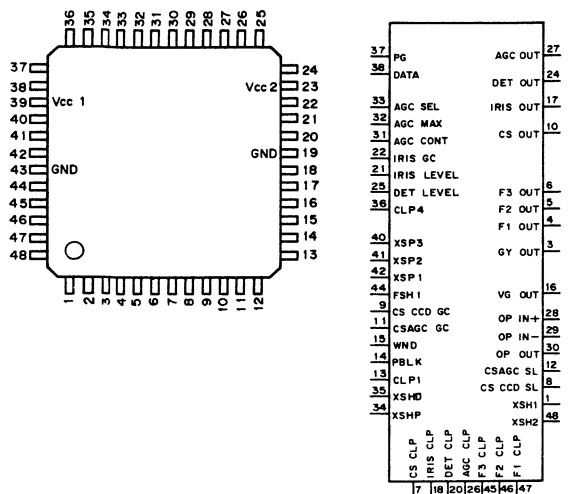
VIDEO SIGNAL SWITCH, BLANKING
- TOP VIEW -



CXA1390AR (SONY)

C-MOS SAMPLE & HOLD AND AGC FOR CCD

- TOP VIEW -



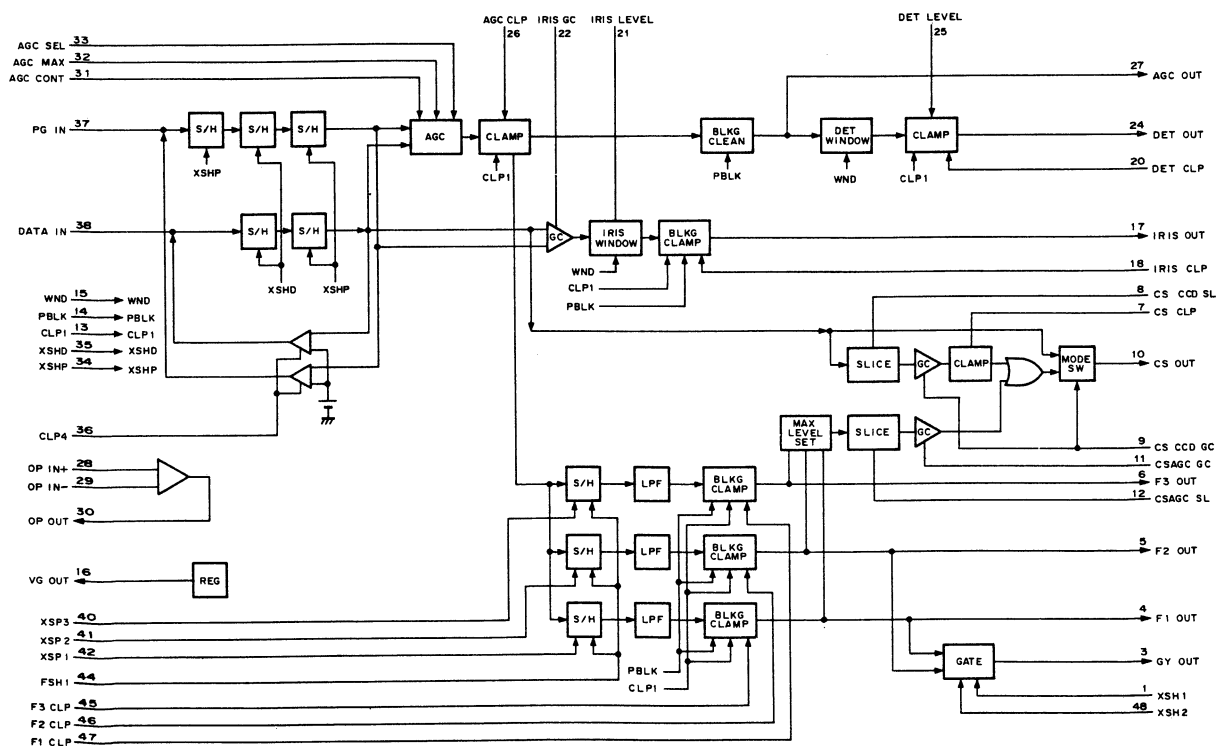
INPUT

XSH1, XSH2 : SAMPLE AND HOLD PULSE INPUTS FOR 1H DELAY LINE
 XSP3, XSP4 : SAMPLE AND HOLD PULSE INPUTS FOR CCD IMAGER
 XSP3, XSP2, XSP1 : SAMPLE AND HOLD PULSE INPUTS FOR COLOR SEPARATION
 CS CLP : CLAMP INPUT FOR COLOR SEPARATION
 IRIS CLP : CLAMP INPUT FOR IRIS CONT.
 DET CLP : CLAMP INPUT FOR SIGNAL DETECT
 AGC CLP : CLAMP INPUT FOR AGC
 F3/F2/F1 CLP : CLAMP INPUTS FOR F1, F2 AND F3
 CS CCD SL : HIGH LUMINANCE DET LEVEL ADJ FOR INPUT SIGNAL
 CS CCD GC : HIGH LUMINANCE GAIN ADJ FOR INPUT SIGNAL
 CSAGC GC : HIGH LUMINANCE DET LEVEL ADJ FOR AFTER AGC
 CSAGC SL : HIGH LUMINANCE DET LEVEL ADJ FOR INPUT SIGNAL
 IRIS LEVEL : WEIGHT ADJ INPUT FOR DET OUTPUT
 IRIS GC : GAIN CONT INPUT FOR IRIS OUT
 DET LEVEL : WEIGHT ADJ INPUT FOR DET OUTPUT
 AGC CONT : AGC AMPLIFIER GAIN CONT INPUT
 AGC MAX : AGC AMPLIFIER MAX GAIN CONT INPUT
 CLP1 : CLAMP PULSE 1 INPUT
 PBLK : PRE BLKG PULSE INPUT
 WND : WINDOW PULSE INPUT
 CLP4 : CLAMP PULSE 4 INPUT
 OP IN + : NON-INVERTING INPUT OF OPERATIONAL AMPLIFIER
 OP IN - : INVERTING INPUT OF OPERATIONAL AMPLIFIER
 AGC SEL : GAIN SELECT FOR AGC AMPLIFIER
 PG IN : CCD SIGNAL INPUT
 DATA IN : LOCK SPEED ADJ INPUT FOR COLOR SEPARATION S/H

OUTPUT

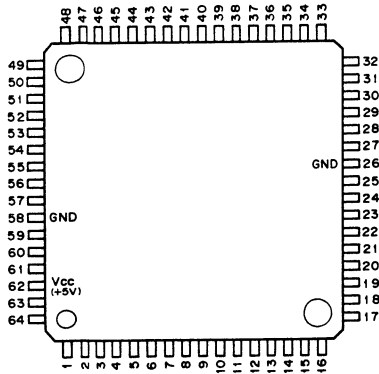
GY OUT : GY OUTPUT
 F1, F2, F3 OUT : F1, F2 AND F3 OUTPUTS
 AGC OUT : AGC OUTPUT
 CS OUT : COLOR SEPARATION OUTPUT
 IRIS OUT : IRIS OUTPUT
 DET OUT : DET OUTPUT
 VG OUT : REGULATED DC OUTPUT
 OP OUT : OPERATIONAL AMPLIFIER OUTPUT

PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	I	XSH1	13	I	CLP 1	25	I	DET LEVEL	37	I	PG IN
2	O	DC OUT	14	I	PBLK	26	I	AGC CLP	38	I	DATA IN
3	O	GY OUT	15	I	WND	27	O	AGC OUT	39	-	Vcc1
4	O	F1 OUT	16	O	VG OUT	28	I	OP IN +	40	I	XSP3
5	O	F2 OUT	17	O	IRIS OUT	29	I	OP IN -	41	I	XSP2
6	O	F3 OUT	18	I	IRIS CLP	30	O	OP OUT	42	I	XSP1
7	I	CS CLP	19	-	GND	31	I	AGC CONT	43	-	GND
8	I	CS CCD SL	20	I	DET CLP	32	I	AGC MAX	44	I	FSH1
9	I	CS CCD GC	21	I	IRIS LEVEL	33	I	AGC SEL	45	I	F3 CLP
10	O	CS OUT	22	I	IRIS GC	34	I	XSHP	46	I	F2 CLP
11	I	CS AGC GC	23	-	Vcc2	35	I	XSHD	47	I	F1 CLP
12	I	CS AGC SL	24	O	DET OUT	36	I	CLP4	48	I	XSH2



CX1391R (SONY) FLAT PACKAGE

PROCESSING IC FOR COMPLEMENTARY COLOR MOSAIC CCD CAMERA
- TOP VIEW -

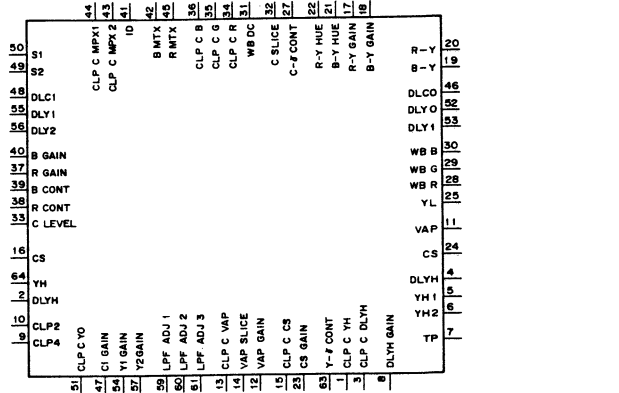


INPUT

B, R CONT : B, RCH WB AMPLIFIER GAIN CONTROL
B, R GAIN : B, RCH WB AMPLIFIER GAIN CONTROL (PRE-WB)
B, R MTX : B, R SIGNAL OPERATIONS MTX COEFFICIENT ADJ.
C LEVEL : CHROMA (R.G.B) GAIN CONTROL
C SLICE : CHROMA (R.G.B) SIGNALS DARK SLICE LEVEL ADJ.
C-Y CONT : CHROMA (R.G.B) γ CURVE ADJ.
C1 GAIN : DLC1 SIGNAL GAIN CONTROL
CLP C R.G.B : CAPACITOR CONNECTING FOR R.G.B WB AMPLIFIER CLAMP
CLP C CS : CAPACITOR CONNECTING FOR CS CLAMP
CLP C DLYH : CAPACITOR CONNECTING FOR DLYH CLAMP
CLP C MPX1, 2 : CAPACITOR CONNECTING FOR MPX CLAMP
CLP C VAP : CAPACITOR CONNECTING FOR VAP CLAMP
CLP C YO : CAPACITOR CONNECTING FOR YO CLAMP
CLP C YH : CAPACITOR CONNECTING FOR YH CLAMP
CLP2 : OPB CLAMP
CLP4 : BLK CLAMP
CS IN : AGC CS SIGNAL
CS GAIN : V-APCN CS SIGNAL GAIN CONTROL
DLC1, Y1, Y2 : DLC1, Y1, Y2 SIGNAL
DLYH : DLYH SIGNAL
DLYH GAIN : DLYH SIGNAL GAIN CONTROL
ID : COLOR DISCRIMINATION PULSE
LPF ADJ 1 : DETERMINES THE CHARACTERISTICS OF THE LPF FOR 1H DL
LPF ADJ 2 : DETERMINES THE CHARACTERISTICS OF THE CHROMA LPF (R.G.B.CS)
LPF ADJ 3 : DETERMINES THE CHARACTERISTICS OF THE LPF FOR V-APCN
R-Y, B-Y GAIN : R-Y, B-Y SIGNAL OUTPUT LEVEL ADJ.
R-Y, B-Y HUE : R-Y, B-Y HUE CONTROL
S1, 2 : S1, 2 SIGNAL
VAP GAIN : V-APCN SIGNAL OUTPUT LEVEL ADJ.
VAP SLICE : V-APCN SIGNAL DARK SLICE VOLUME ADJ.
Y-Y CONT : YH γ CURVE ADJ.
Y1, 2 GAIN : DLY1, 2 SIGNAL GAIN CONTROL
YH : YH SIGNAL

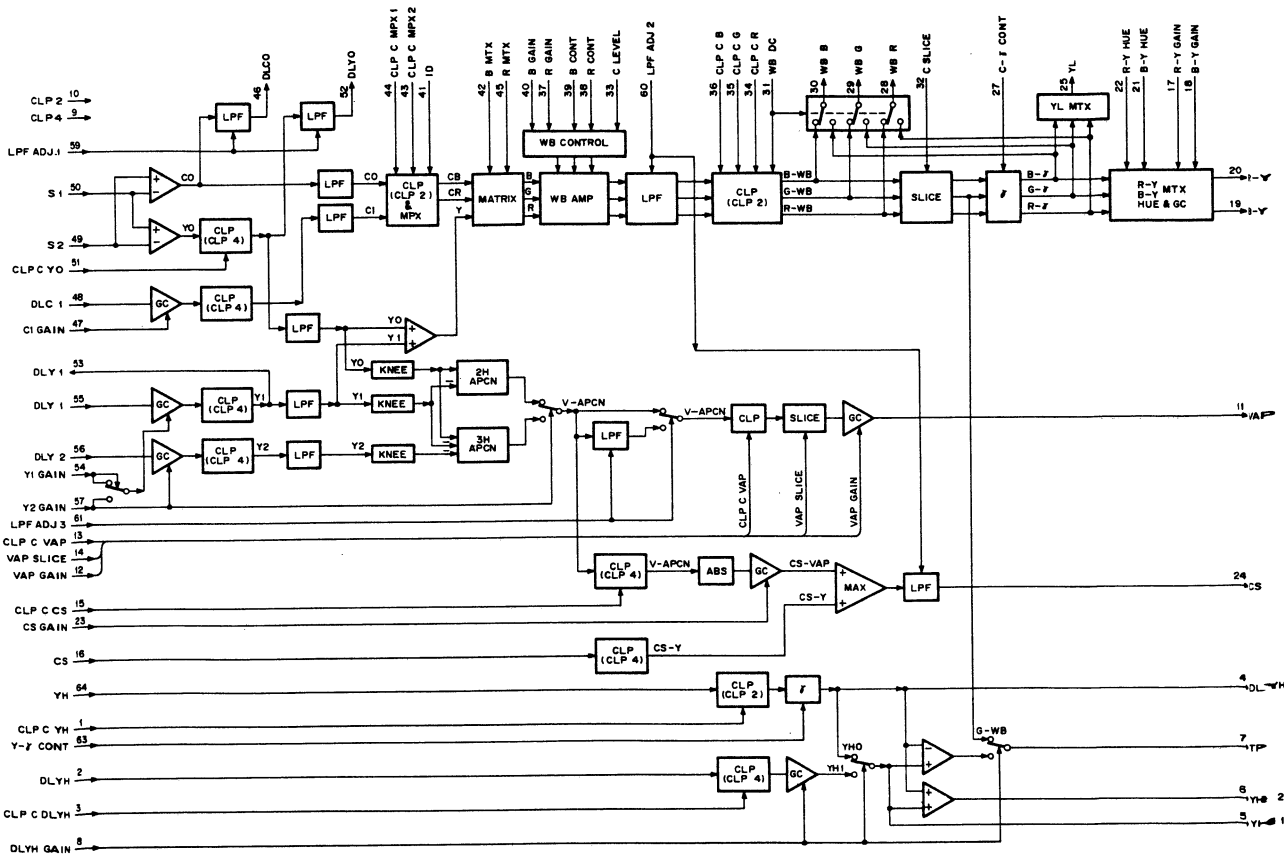
(V_{CC} = +5V)

PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	I	CLP C YH	17	I	R-Y GAIN	33	I	C LEVEL	49	I	S2
2	I	DLYH	18	I	B-Y GAIN	34	I	CLP C R	50	I	S1
3	I	CLP C DLYH	19	O	B-Y	35	I	CLP C G	51	I	CLP C YO
4	O	DLYH	20	O	R-Y	36	I	CLP C B	52	O	DLYO
5	O	YH1	21	I	B-Y HUE	37	I	R GAIN	53	O	DLY1
6	O	YH2	22	I	R-Y HUE	38	I	R CONT	54	I	Y1 GAIN
7	O	TP	23	I	CS GAIN	39	I	B CONT	55	I	DLY1
8	I	DLYH GAIN	24	O	CS	40	I	B GAIN	56	I	DLY2
9	I	CLP4	25	O	YL	41	I	ID	57	I	Y2 GAIN
10	I	CLP2	26	-	GND	42	I	B MTX	58	-	GND
11	O	VAP	27	I	C-Y CONT	43	I	CLP C MPX2	59	I	LPF ADJ 1
12	I	VAP GAIN	28	O	WB R	44	I	CLP C MPX1	60	I	LPF ADJ 2
13	I	CLP C VAP	29	O	WB G	45	I	R MTX	61	I	LPF ADJ 3
14	I	VAP SLICE	30	O	WB B	46	O	DLCO	62	-	V _{CC}
15	I	CLP C CS	31	O	WB DC	47	I	C1 GAIN	63	I	Y-Y CONT
16	I	CS	32	I	C SLICE	48	I	DLC1	64	I	YH



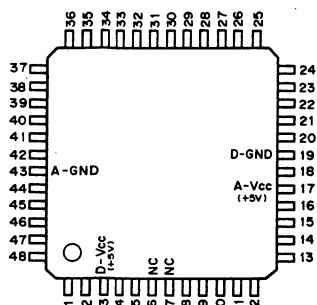
OUTPUT

CS OUT : CS SIGNAL
DLCO : DLCO SIGNAL
DLCO, 1 : DLCO, 1 SIGNAL
DLYO, 1 : DLYO, 1 SIGNAL
DLYH : DLYH SIGNAL
R-Y, B-Y : R-Y, B-Y SIGNAL
TP : ADJUSTING PIN
VAP : V-APCN SIGNAL
WB R.G.B : R.G.B SIGNAL
WB DC : AUTO WB DC OUTPUT OR WB R.G.B TURN TO γ MODE
YH1, 2 : YH1, 2 SIGNAL
YL : YL SIGNAL

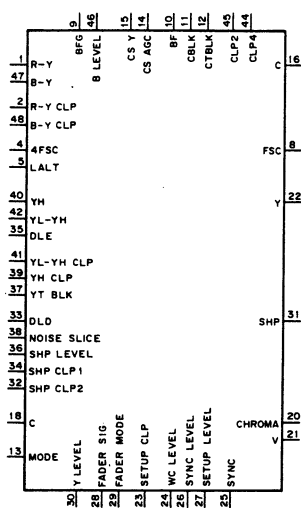


DXC-C1 (J, UC)
DXC-C1 MDP (EK)

CXA1392R (SONY) FLAT PACKAGE
ENCODER FOR CCD COLOR CAMERA
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	R-Y	13	I	MODE	25	I	SYNC	37	I	YTBK
2	I	R-Y CLP	14	I	CS AGC	26	I	SYNC LEVEL	38	I	NOISE SLICE
3	-	D-VCC (+5V)	15	I	CSY	27	I	SETUP LEVEL	39	I	YH CLP
4	I	4FSC	16	O	C	28	I	FADER SIG	40	I	YH
5	I	LALT	17	-	A-VCC (+5V)	29	I	FADER MODE	41	I	YL-YH CLP
6	-	NC	18	I	C	30	I	Y LEVEL	42	I	YL-YH
7	-	NC	19	-	D-GND	31	O	SHP	43	-	A-GND
8	O	FSC	20	O	CHROMA	32	I	SHP CLP2	44	I	CLP4
9	I	BFG	21	O	V	33	I	DLD	45	I	CLP2
10	I	BF	22	O	Y	34	I	SHP CLP1	46	I	B LEVEL
11	I	CBLK	23	I	SETUP CLP	35	I	DLE	47	I	B-Y
12	I	CTBLK	24	I	WC LEVEL	36	I	SHP LEVEL	48	I	B-Y CLP

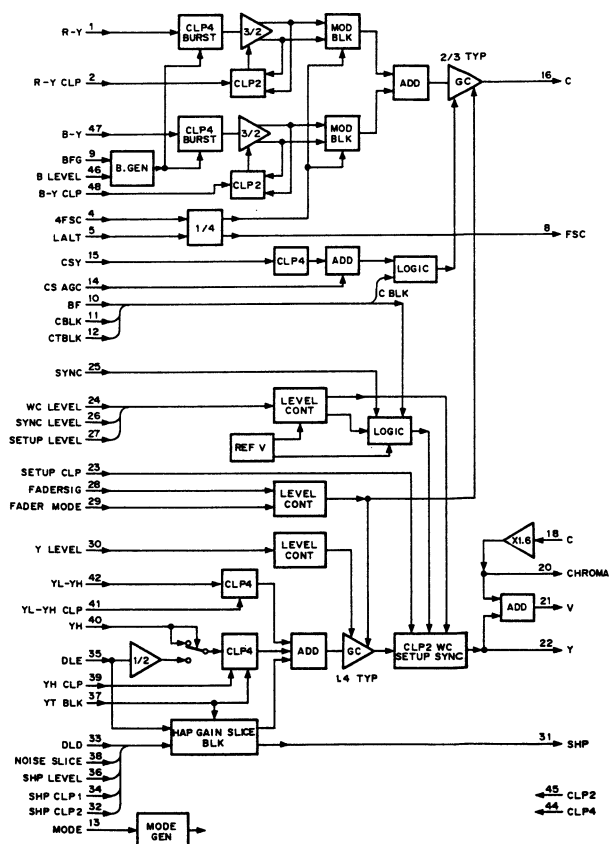


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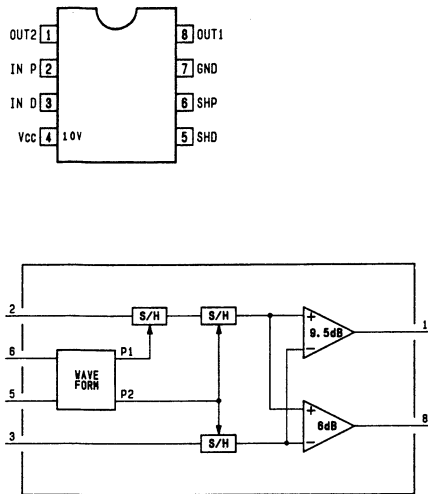
INPUT
4FSC      : 4FSC USED TO MAKE UP THE SUB CARRIER
B LEVEL   : CONTROLS THE BURST LEVEL
BF         : BURST FLAG PULSE
BFG       : INSERTS PULSE SLIGHT LARGER THAN BF ON BOTH ENDS
            : INPUT FOR CHROMA SIGNAL PASSED THROUGH BFF
CBLK      : COMPOSITE BLANKING PULSE
CLP2.4    : CLAMP2.4 PULSE INPUT
CS AGC    : SUPPRESS CHROMA SIGNAL AT THE AGC GAIN CONTROL SIGNAL
CSY       : SUPPRESS CHROMA SIGNAL AT THE Y SIGNAL
CTBLK     : CHROMA TITLER PULSE
DLD       : CONNECTS THE DELAY LINE DRIVE SIDE OF THE APERTURE SIGNAL
DLY       : CONNECTS THE DELAY LINE END SIDE OF THE APERTURE SIGNAL
FADER MODE: BLACK FADER AND WHITE FADER MODE SELECT
FADER SIG  : CONTROLS THE SIGNAL SUPPRESS LEVEL DURING BLACK FADER, CONTROLS
            : THE SIGNAL SUPPRESS LEVEL DURING WHITE FADER AND AT THE SAME TIME
            : CONTROLS THE SET UP LEVEL
LALT      : INPUT FOR LINE ALTERNATE SIGNAL DURING PAL MODE
MODE       : SELECTS NTSC, PAL OR NTSC X 2, PAL X 2 MODES
NOISE SLICE : CONTROLS THE SLICE LEVEL OF THE APERTURE SIGNAL
            : R-Y, B-Y SIGNAL
R-Y, B-Y CLP : CONNECTING THE CAPACITOR FOR R-Y, B-Y MODULATOR CLAMP
SETUP CLP  : CONNECTING FOR THE WHITE CLIP CLAMP CAPACITOR
SETUP LEVEL: SET UP LEVEL CONTROL
SHP CLP1, 2 : CONNECTS THE CLAMP CAPACITOR USED FOR THE SLICE OF THE APERTURE
            : SIGNAL
SHP LEVEL  : CONTROL OF THE APERTURE SIGNAL LEVEL
SYNC       : SYNC PULSE
SYNC LEVEL : SYNC LEVEL CONTROL
WC LEVEL   : WHITE CLIP LEVEL CONTROL
Y LEVEL    : Y SIGNAL LEVEL CONTROL
YH         : YH SIGNAL
YH CLP     : CONNECTS THE CAPACITOR FOR YH INPUT CLAMP
YL-YH      : Y APERTURE SIGNALS, TITLER SIGNALS AND YL-YH SIGNALS
YL-YH CLP  : CONNECTS THE CAPACITOR FOR YL-YH INPUT CLAMP
YTBLK     : Y TITLER PULSE

OUTPUT
C          : CHROMA SIGNAL OUTPUT
CHROMA    : CHROMA SIGNAL OUTPUT WHEN USED FOR Y/C SEPARATION OUTPUT
FSC       : OUTPUTS A SUB CARRIER WITH THE SAME PHASE AS B-Y
APERTURE  : APERTURE SIGNAL
V         : COMPOSITE VIDEO SIGNAL
Y         : Y SIGNAL OUTPUT WHEN USED FOR Y/C SEPARATION OUTPUT

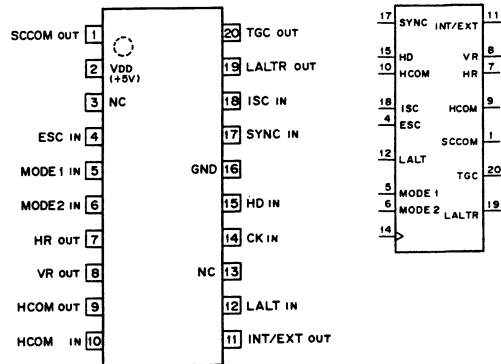
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CXA1439M (SONY) FLAT PACKAGE
CORRELATED DOUBLE SAMPLING
- TOP VIEW -



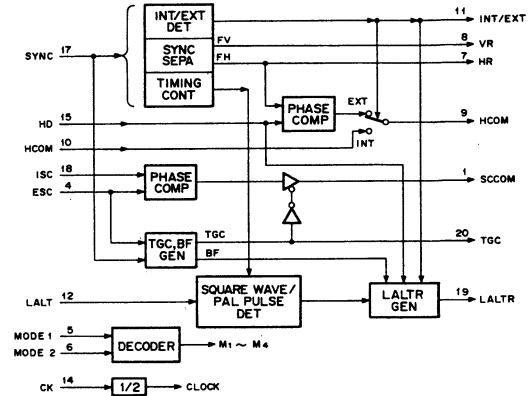
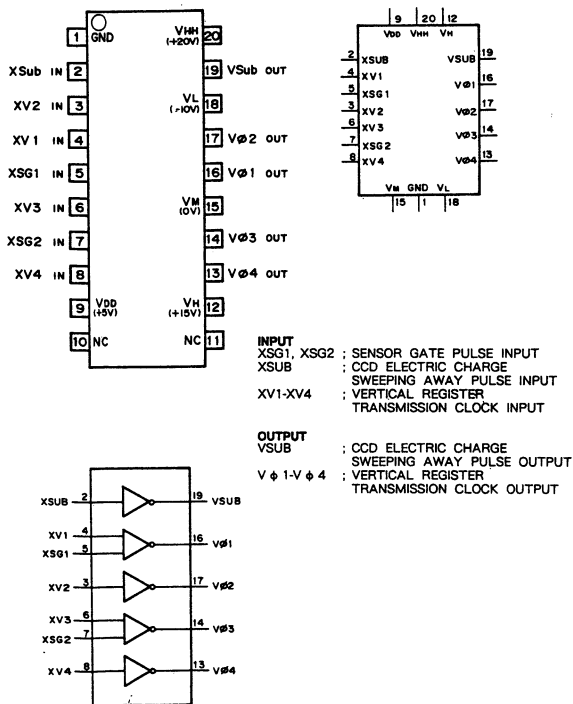
CXD1216M (SONY) FLAT PACKAGE
C-MOS GENLOCK DRIVER
- TOP VIEW -



INPUT		MODE	SYSTEM
MODE1	MODE2		
0	0	M1	PAL-VBS
1	0	M2	PALM-VBS
0	1	M3	PAL,SECAM-VS/SC/LALT
1	1	M4	NTSC-VBS,NTSC-VS/SC PALM-VS/SC/LALT

0 : LOW LEVEL
1 : HIGH LEVEL

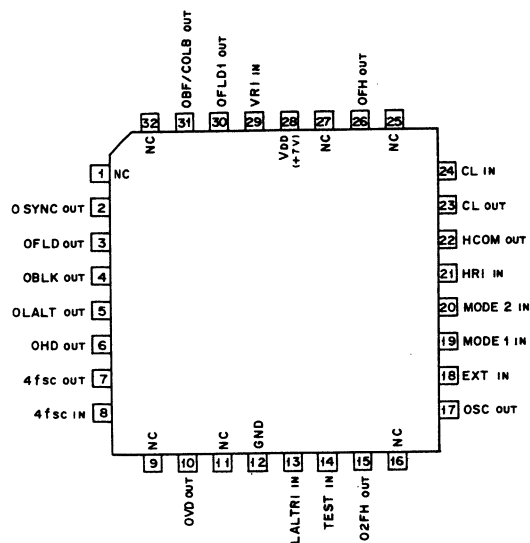
CXD1250N (SONY) FLAT PACKAGE
C-MOS VERTICAL CLOCK DRIVER FOR CCD
- TOP VIEW -



INPUT
CK : 4fsc CLOCK INPUT
ESC : SC/COLOR BURST
HCOM : PHASE COMPARE FROM CXD1217
HD : H DRIVE FROM CXD1217
ISC : SUBCARRIER FROM CXD1217
LALT : LALT FROM REFERENCE SIGNAL GENERATOR
MODE1,2 : SYSTEM SELECT
SYNC : SYNC FROM REFERENCE SIGNAL GENERATOR

OUTPUT
HCOM : PHASE COMPARETOR HR WITH HD
HR : fh OF SYNC SEPARATE
INT/EXT : INTERNAL/EXTERNAL SPECIFIED
LALTR : LINE CHANGE RESET
SCCOM : PHASE COMPARETOR ESC WITH ISC
TGC : TRISTATE CONTROL
VR : fv OF SYNC SEPARATE

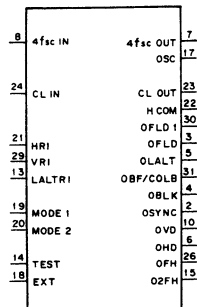
CXD1217Q (SONY) FLAT PACKAGE

C-MOS SYNC GENERATOR
- TOP VIEW -

SYSTEM	4fsc	CLOCK
NTSC	910f _H	910f _H
PAL	1135f _H + 2f _v	908f _H
PALM	909f _H	910f _H
SECAM	—	908f _H

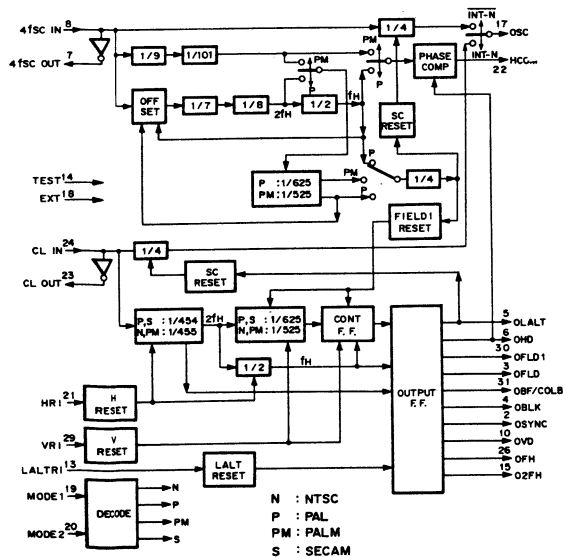
INPUT		SYSTEM
MODE1	MODE2	
0	0	NTSC
0	1	SECAM
1	0	PALM
1	1	PAL

0 : LOW LEVEL
1 : HIGH LEVEL

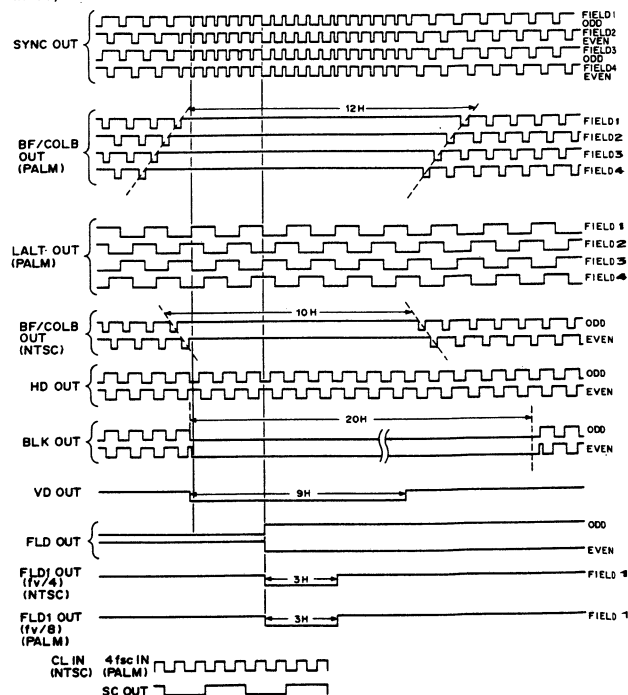


INPUT
4fsc IN : 4fsc
CL IN : CLOCK
EXT : SYNC MODE SELECT
(L : INTERNAL / H : EXTERNAL)
HRI : HORIZONTAL RESET
LALTRI : LINE ALTERNATE RESET
MODE1,2 : SYSTEM SELECT
VRI : VERTICAL RESET

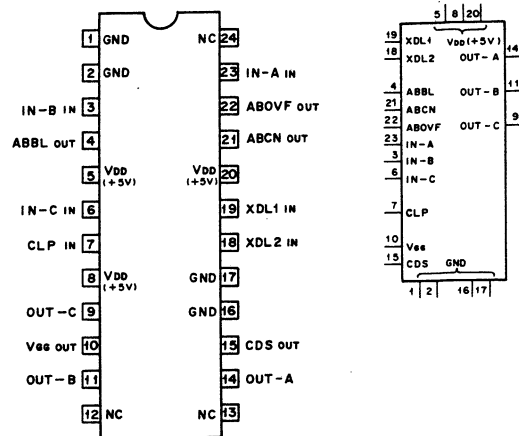
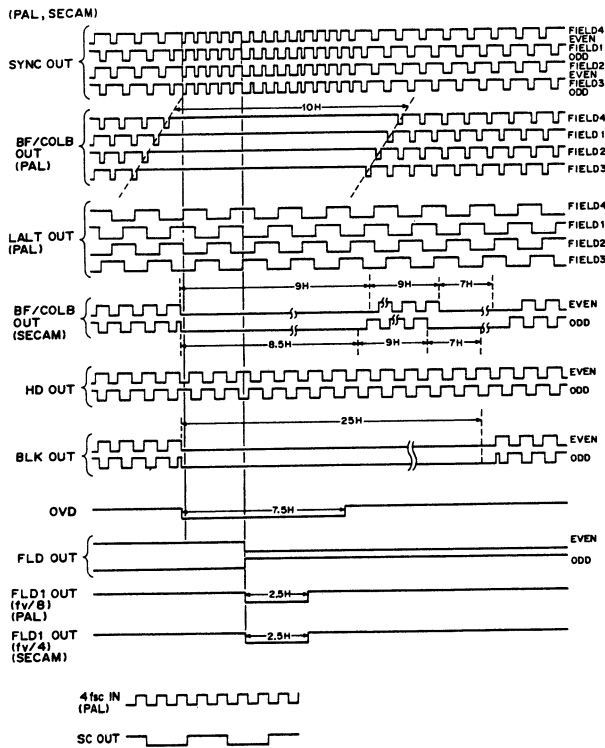
OUTPUT
4fsc OUT : 4fsc
CL OUT : CLOCK
HCOM : PHASE COMPARATOR
O2FH : 2f_H
OBF/COLB : BURST FLAG/COLOR BLANKING
OBLK : COMPOSITE BLANKING
OFH : f_H
OFLD : FIELD PULSE
OFLD1 : FIELD1
OHD : HORIZONTAL DRIVE
OLALT : LINE ALTERNATE
OSC : SUBCARRIER
OSYNC : COMPOSITE SYNC
OVD : VERTICAL DRIVE



(NTSC, PALM)



OXL1517N (SONY) FLAT PACKAGE
C-MOS CCD SIGNAL PROCESSOR
- TOP VIEW -

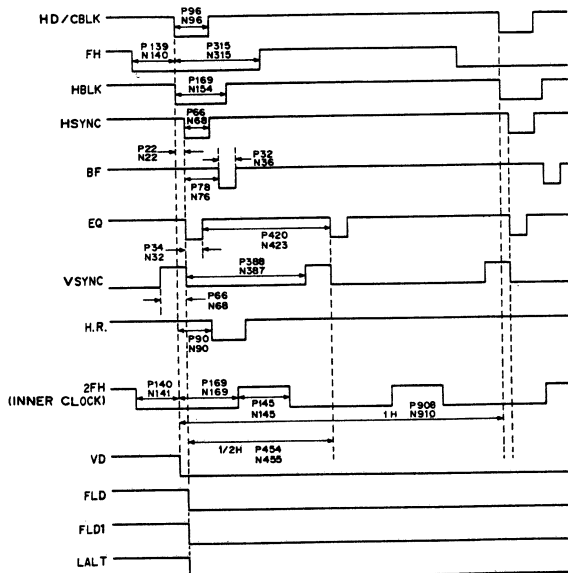


INPUT

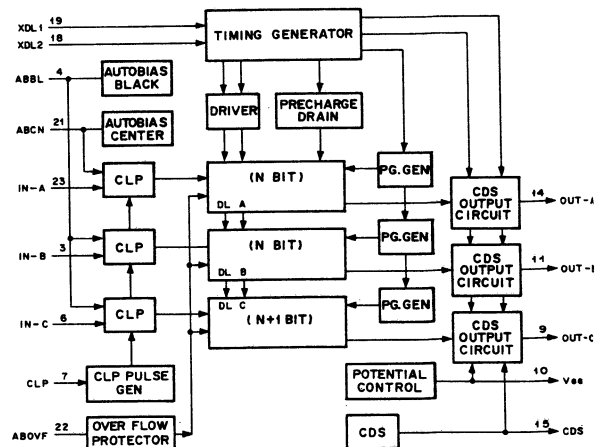
- CLP : CLAMP PULSE INPUT
- IN-A : SIGNAL INPUT A CHANNEL (C)
- IN-B : SIGNAL INPUT B CHANNEL (Y)
- IN-C : SIGNAL INPUT C CHANNEL (Y)
- XDL1, 2 : CLOCK PULSE INPUT 1, 2

OUTPUT

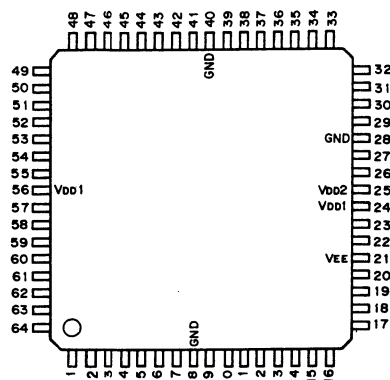
- ABBL : AUTOBIAS DC OUTPUT FOR Y SIGNAL
- ABCN : AUTOBIAS DC OUTPUT FOR C SIGNAL
- ABOVF : AUTOBIAS DC OUTPUT
- CDS : DC OUTPUT FOR CDS
- OUT-A, B, C : SIGNAL OUTPUT A, B, C CHANNEL
- Vee : OUTPUT CIRCUIT BIAS DC OUTPUT



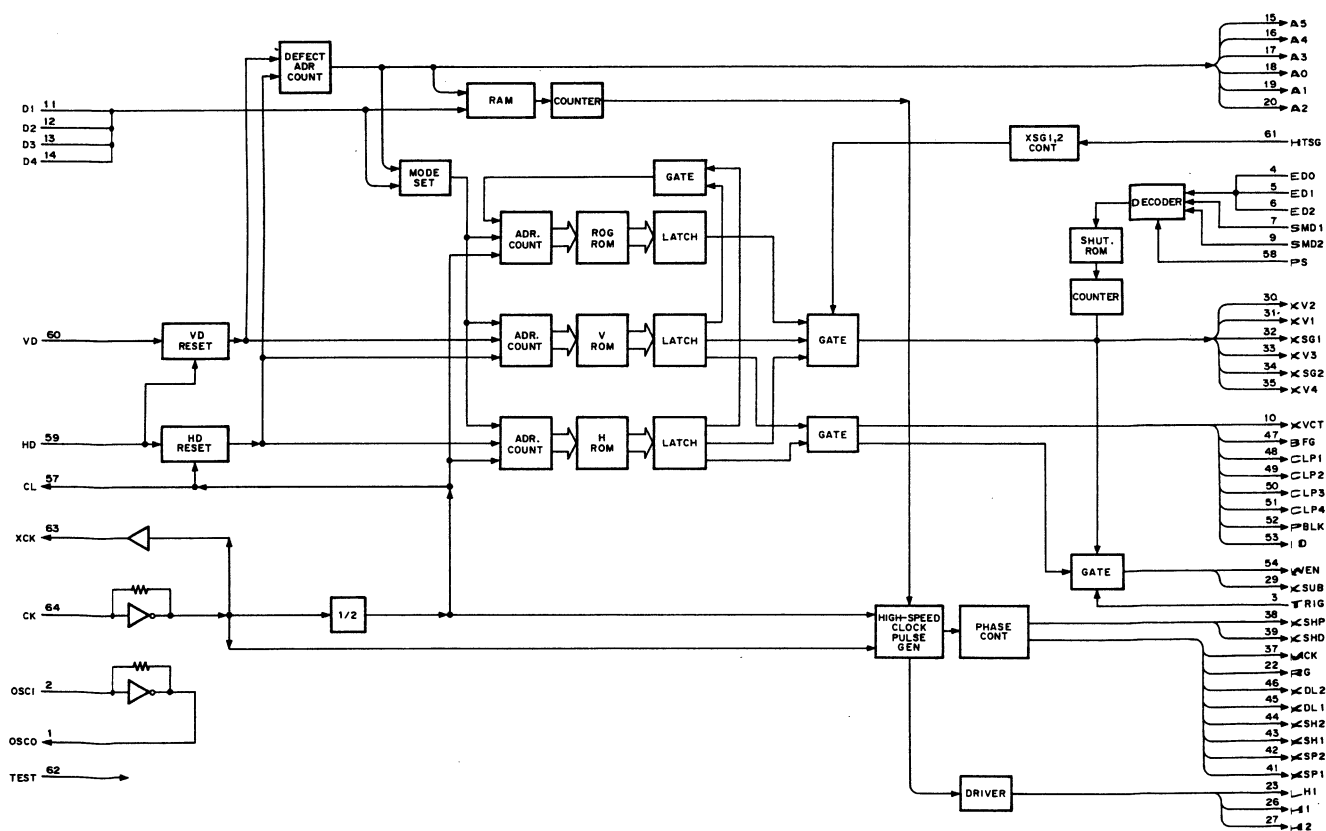
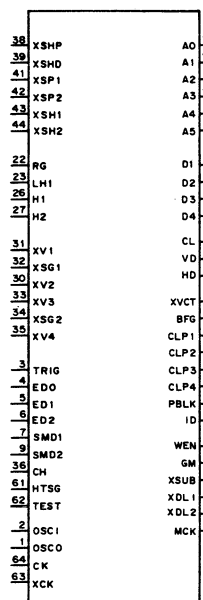
P: PAL, SECAM
N: NTSC, PALM



CXD1252AR (SONY)

C-MOS TIMING PULSE GENERATOR FOR CCD
- TOP VIEW -

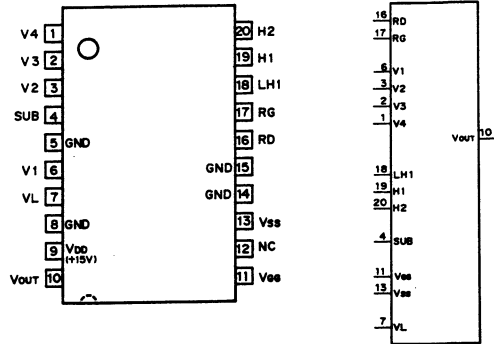
PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	O	OSCO	17	O	A3	33	O	XV3	49	O	CLP2
2	I	OSCI	18	O	A0	34	O	XSG2	50	O	CLP3
3	I	TRIG	19	O	A1	35	O	XV4	51	O	CLP4
4	I	ED0	20	O	A2	36	I	CH	52	O	PBLK
5	I	ED1	21	-	VEE	37	O	MCK	53	O	ID
6	I	ED2	22	O	RG	38	O	XSHP	54	O	WEN
7	I	SMD1	23	O	LH1	39	O	XSHD	55	I	GM
8	-	GND	24	-	VDD1	40	-	GND	56	-	VDD1
9	I	SMD2	25	-	VDD2	41	O	XSP1	57	O	CL
10	O	XVCT	26	O	H1	42	O	XSP2	58	I	PS
11	I	D1	27	O	H2	43	O	XSH1	59	I	HD
12	I	D2	28	-	GND	44	O	XSH2	60	I	VD
13	I	D3	29	O	XSUB	45	O	XDL1	61	I	HTSG
14	I	D4	30	O	XV2	46	O	XDL2	62	I	TEST
15	O	A5	31	O	XV1	47	O	BFG	63	O	XCK
16	O	A4	32	O	XSG1	48	O	CLP1	64	I	CK



INPUT
 CH : MOSAIC/STRIPE COLOR CODING (L : MOSAIC) SELECT SIGNAL
 CK : MAIN CLOCK PULSE
 D1-D4 : DATA INPUT FOR EXTERNAL ROM
 EDO-ED2 : SHUTTER SPEED CONTROL PULSE
 GM : NORMAL/G3 SELECT SIGNAL (L : NORMAL, H : G3)
 HD : HORIZONTAL DRIVE PULSE
 HTSG : XSG1, XSG2 CONTROL PULSE (L : STOP, H : GENERATE)
 OSC1 : INVERTER INPUT FOR OSCILLATOR
 SMD1, SMD2 : SHUTTER MODE SET SIGNAL
 TEST : TEST SIGNAL (H : TEST MODE)
 TRIG : CONTINUOUS VARIABLE SHUTTER CONTROL PULSE
 VD : VERTICAL DRIVE PULSE

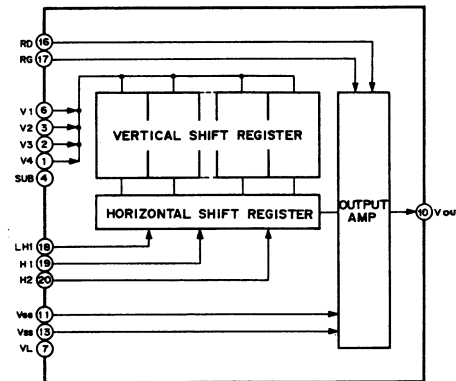
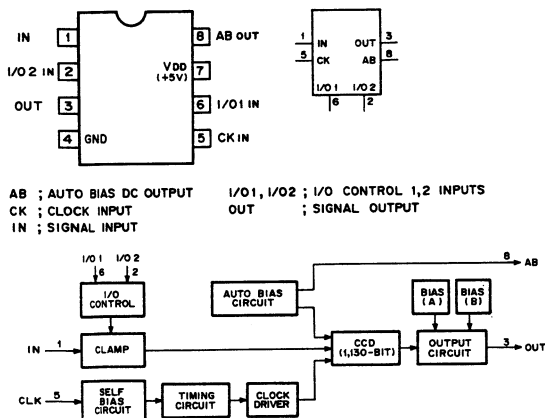
OUTPUT
 A0-A5 : ADDRESS OUTPUT FOR EXTERNAL ROM
 BFG : ENCODER/CHROMA MODULATOR PULSE
 CL : 1/2 CK PULSE
 CLP1-CLP4 : CLAMP PULSE
 H1, H2 : CLOCK PULSE FOR DRIVING HORIZONTAL REGISTER
 ID : LINE DISCRIMINATE PULSE (MOSAIC MODE) : L (STRIPE MODE)
 LH1 : CLOCK PULSE FOR DRIVING CCD HORIZONTAL FINAL REGISTER
 MCK : CLOCK PULSE FOR G3
 OSCO : INVERTER OUTPUT FOR OSCILLATOR
 PBLK : BLANKING CLEANING PULSE
 RG : RESET GATE PULSE
 WEN : WRITE ENABLE PULSE (ONLY LOW SPEED SHUTTER MODE)
 XCK : INVERTED CK PULSE
 XDL1, XDL2 : DELAY LINE CLOCK (MOSAIC MODE) /CHROMA SEPARATE S/H PULSE (STRIPE)
 XSG1, XSG2 : CCD SENSOR ELECTRIC CHARGE READ OUT PULSE
 XSH1, XSH2 : SELECT S/H PULSE
 XSHD : DATA S/H PULSE
 XSHP : PRE CHARGE S/H PULSE
 XSP1, XSP2 : CHROMA SEPARATE S/H PULSE
 XSUB : CCD ELECTRIC CHARGE SWEEPING AWAY PULSE
 XV1-XV4 : CLOCK PULSE FOR DRIVING CCD VERTICAL REGISTER
 XVCT : POW

ICX038BNA (SONY) (NTSC,COLOR)
 ICX039BNA (SONY) (PAL,COLOR)
 1/2-INCH CCD IMAGE BLOCK
 - BOTTOM VIEW -

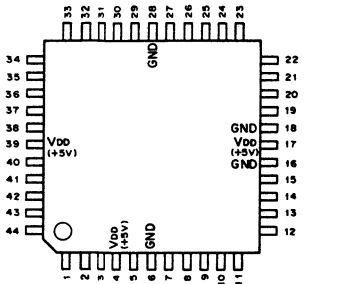


H1, H2 : HORIZONTAL REGISTER TRANSFER CLOCK
 LH1 : HORIZONTAL REGISTER LAST STAGE TRANSFER CLOCK
 RD : RESET DRAIN BIAS
 RG : RESET GATE CLOCK
 SUB : OVERFLOW DRAIN
 VGG : OUTPUT AMP GATE BIAS
 VL : PROTECTION TRANSISTOR BIAS
 VSS : OUTPUT AMP SOURCE
 V1 - V4 : VERTICAL REGISTER TRANSFER CLOCK
 VOUT : SIGNAL OUTPUT

CXL5504M (SONY)
 C-MOS CCD 1H DELAY LINE
 - TOP VIEW -

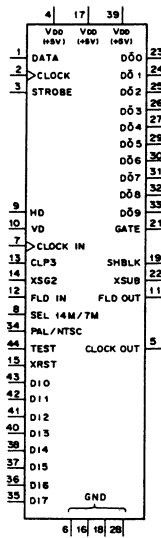


CXD8822Q (SONY)

CCD IRIS ELECTRON SHUTTER
- TOP VIEW -

(VDD = +5V)

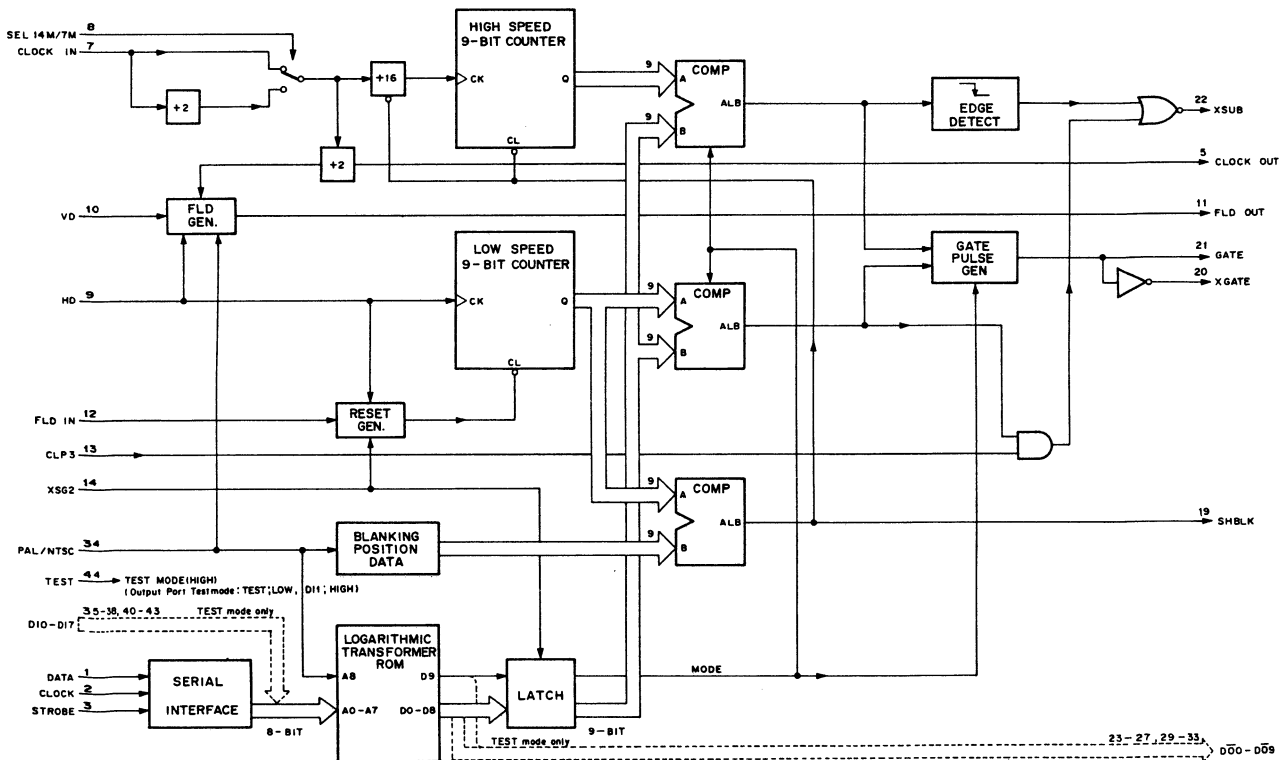
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	DATA	23	O	DO0
2	I	CLOCK	24	O	DO1
3	I	STROBE	25	O	DO2
4	-	VDD	26	O	DO3
5	O	CLOCK OUT	27	O	DO4
6	-	GND	28	-	GND
7	I	CLOCK IN	29	O	DO5
8	I	SEL 14M/7M	30	O	DO6
9	I	HD	31	O	DO7
10	I	VD	32	O	DO8
11	O	FLD OUT	33	O	DO9
12	I	FLD IN	34	I	PAL/NTSC
13	I	CLP3	35	I	DI7
14	I	XSG2	36	I	DI6
15	I	XRST	37	I	DI5
16	-	GND	38	I	DI4
17	-	VDD	39	-	VDD
18	-	GND	40	I	DI3
19	O	SHBLK	41	I	DI2
20	O	XGATE	42	I	DI1
21	O	GATE	43	I	DI0
22	O	XSUB	44	I	TEST



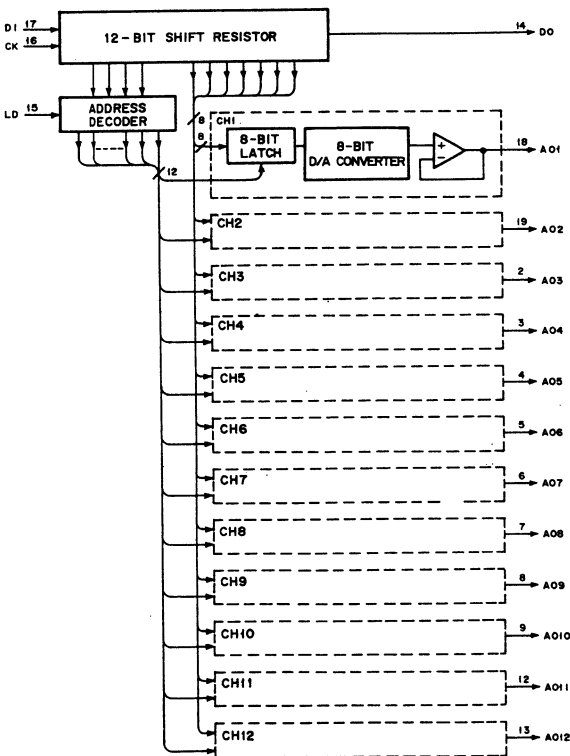
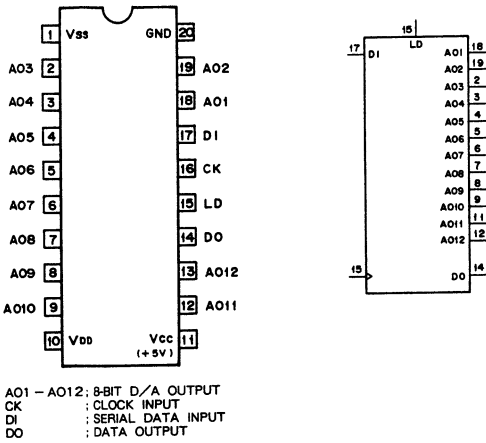
INPUT
 CLOCK : 8-BIT SERIAL CLOCK
 CLOCK IN : SYSTEM CLOCK (7.16MHz/14.32MHz)
 CLP3 : CLAMP PULSE
 DATA : 8-BIT SERIAL DATA
 DI0-DI7 : TEST INPUT
 HD : HORIZONTAL DRIVE
 PAL/NTSC : MODE SELECT
 SEL 14M/7M : CLOCK FREQUENCY
 7.16MHz : LOW 14.32MHz : HIGH
 STROBE : STROBE PULSE
 TEST : TEST MODE
 VD : VERTICAL DRIVE
 XRST : FORCED RESET INPUT
 XSG2 : SENSOR GATE PULSE

OUTPUT
 CLOCK OUT : 3.58MHz
 DO0-DO9 : ROM DATA
 GATE : GATE PULSE HIGH
 SHBLK : SHUTTER V BLANKING PULSE
 XGATE : GATE PULSE LOW
 XSUB : SHUTTER PULSE

INPUT/OUTPUT
 FLD IN/OUT : FIELD SIGNAL

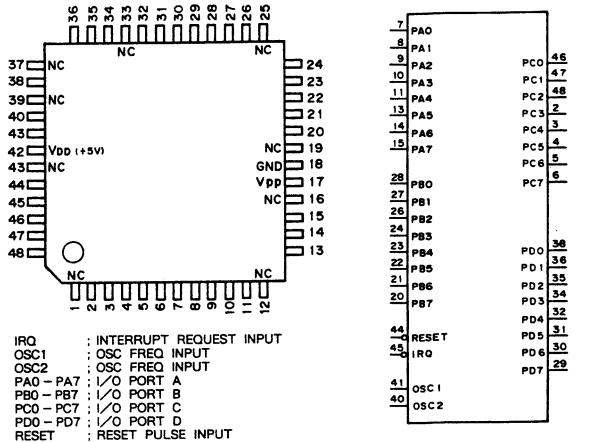


M62352GP (MITSUBISHI) FLAT PACKAGE
C-MOS 8-BITx12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)
- TOP VIEW -

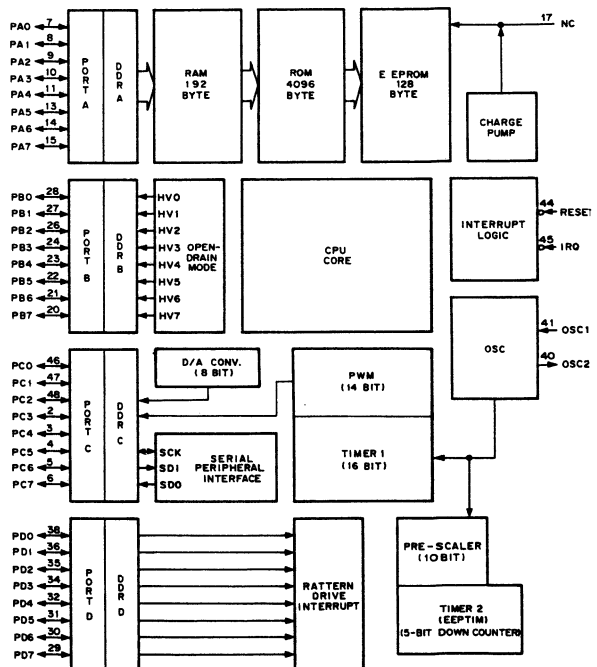


DXC-C1 (J, UC)
DXC-C1 MDP (EK)

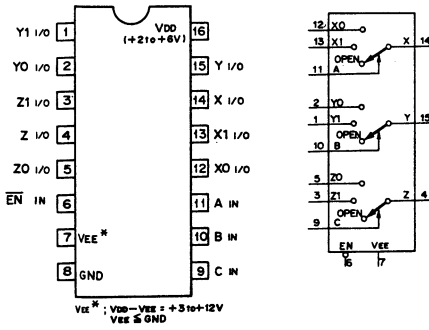
MC68HC05N4 (MOTOROLA) FLAT PACKAGE
HC-MOS 8-BIT SIGNAL CHIP MICROCOMPUTER
- TOP VIEW -



PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	-	NC	13	I/O	PA5	25	-	NC	37	-	NC
2	I/O	PC3	14	I/O	PA6	26	I/O	PB2	38	I/O	PD0
3	I/O	PC4	15	I/O	PA7	27	I/O	PB1	39	-	NC
4	I/O	PC5	16	-	NC	28	I/O	PB0	40	0	OSC2
5	I/O	PC6	17	I	VPP	29	I/O	PD7	41	I	OSC1
6	I/O	PC7	18	-	GND	30	I/O	PD6	42	-	VDD (+5V)
7	I/O	PA0	19	-	NC	31	I/O	PD5	43	-	NC
8	I/O	PA1	20	I/O	PB7	32	I/O	PD4	44	I	RESET
9	I/O	PA2	21	I/O	PB6	33	-	NC	45	I	IRQ
10	I/O	PA3	22	I/O	PB5	34	I/O	PD3	46	I/O	PC0
11	I/O	PA4	23	I/O	PB4	35	I/O	PD2	47	I/O	PC1
12	-	NC	24	I/O	PB3	36	I/O	PD1	48	I/O	PC2



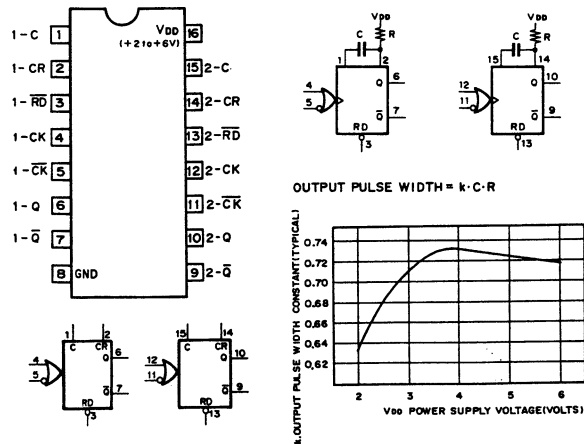
MC74HC4053F (MOTOROLA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -

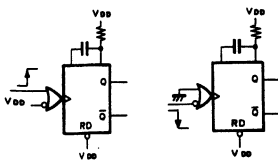
EN	SELECT			ON CHANNEL		
	C	B	A	Z0	Y0	X0
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	X	X	X	OPEN		

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

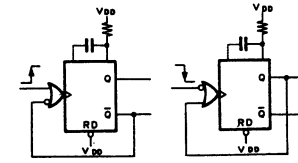
MC74HC4538AF (MOTOROLA) FLAT PACKAGE

C-MOS DUAL RETRIGGERABLE / NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
- TOP VIEW -

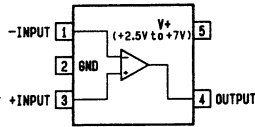
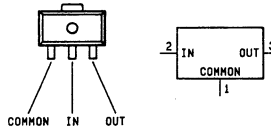
RETRIGGERABLE M.M.V.



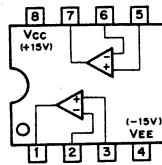
NON-RETRIGGERABLE M.M.V.



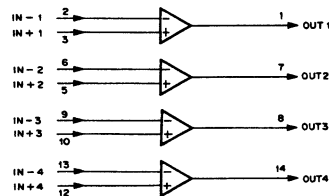
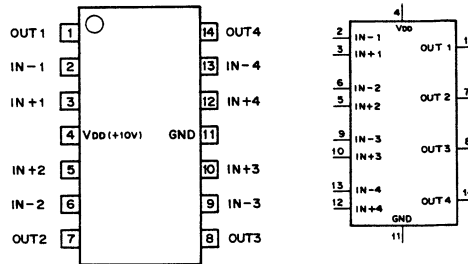
NJM2406F (JRC) FLAT PACKAGE

SINGLE COMPARATOR
- TOP VIEW -NJM79L09UA (JRC) - 9V
VOLTAGE REGULATOR (350mW)

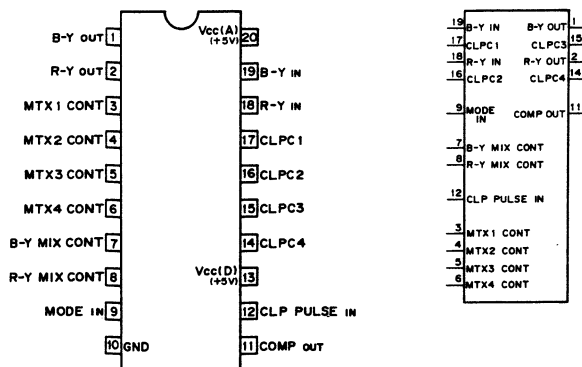
NJU7022M (JRC) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -

NJU7024M (JRC) FLAT PACKAGE

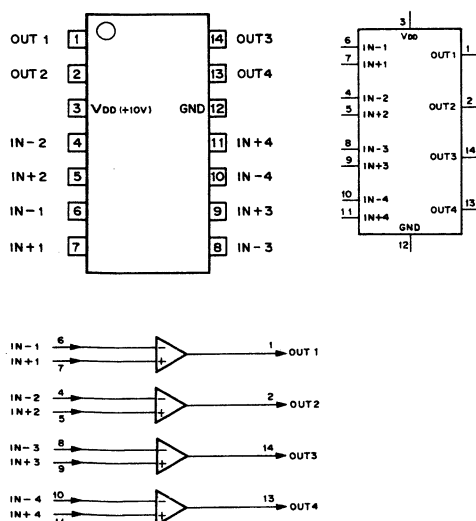
C-MOS 4-CIRCUIT OPERATION AMPLIFIER
- TOP VIEW -

CXA1609N (SONY) FLAT PACKAGE
HUE COMPENSATOR FOR CCD CAMERA
- TOP VIEW -

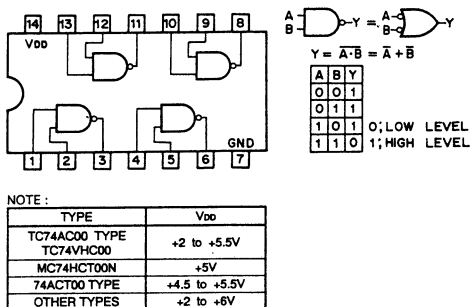


B-Y IN/OUT : B-Y SIGNAL INPUT/OUTPUT
B-Y MIX CONT: B-Y MIX CONTROL
CLPC1~4 : CLAMP CAPACITOR
CLP PULSE IN: CLAMP PULSE INPUT
COMP OUT : COMPENSATION OUTPUT
MODE IN : MODE SELECT INPUT
MTX1~4CONT: MTX CONTROL
R-Y IN/OUT : R-Y SIGNAL INPUT/OUTPUT
R-Y MIX CONT: B-Y MIX CONTROL

NJU7104AM (JRC) FLAT PACKAGE
C-MOS 4-CIRCUIT COMPARATOR
- TOP VIEW -



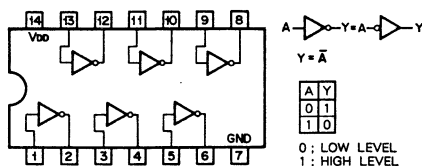
SN74HC00ANS (TI) FLAT PACKAGE
C-MOS QUAD 2-INPUT NAND GATES
- TOP VIEW -



NOTE:

TYPE	V _{DD}
TC74AC00 TYPE	+2 to +5.5V
TC74VHC00	+5V
MC74HCT00N	+5V
74ACT00 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

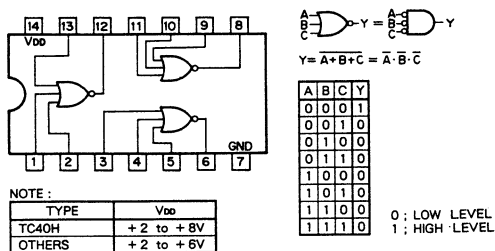
SN74HC04ANS (TI) FLAT PACKAGE
C-MOS HEX INVERTERS
- TOP VIEW -



NOTE:

TYPE	V _{DD}
74HCT04 TYPE	+5V
TC74AC04 TYPE	+2 to +5.5V
TC74VHC04 TYPE	+5V
74ACT04 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

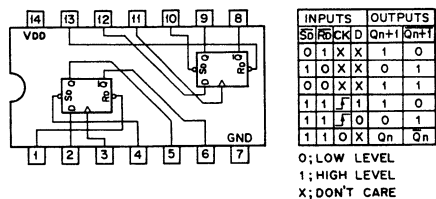
SN74HC27ANS (TI) FLAT PACKAGE
C-MOS 3-LINE POSITIVE-NOR GATE
- TOP VIEW -



NOTE:

TYPE	V _{DD}
TC40H	+2 to +8V
OTHERS	+2 to +6V

SN74HC74ANS (TI) FLAT PACKAGE
C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET
- TOP VIEW -

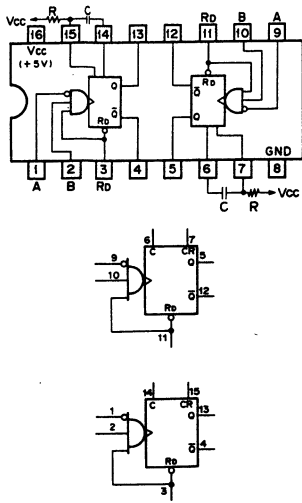


NOTE:

TYPE	V _{DD}
TC74HCT74AF	+5V
TC74ACT74 TYPE	+2 to +5.5V
74ACT74 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

SN74LS123NS (TI) FLAT PACKAGE

TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
- TOP VIEW -



INPUTS		OUTPUTS	
Rd	A	Q	Q'
0	X	X	0
0	X	X	1
1	0	1	0
1	0	1	1
1	1	0	0
1	1	0	1

OUTPUT PULSE WIDTH

$$t_{123}; T_w = 0.28 \left(1 + \frac{700}{R}\right) CR$$

$$t_{123}; T_w = 0.33 \left(1 + \frac{700}{R}\right) CR$$

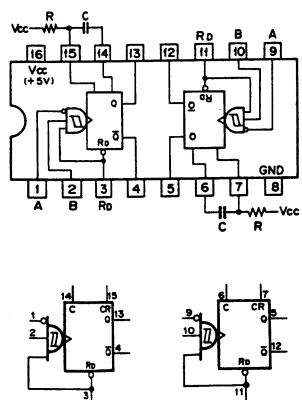
$$t_{123}; T_w = 0.25 \left(1 + \frac{700}{R}\right) CR$$

$$t_{123}; T_w = 0.29 \left(1 + \frac{700}{R}\right) CR$$

$$t_{123}; T_w = 0.45 CR$$

SN74LS221NS (TI) FLAT PACKAGE

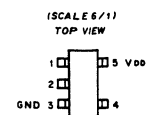
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
- TOP VIEW -



INPUTS		OUTPUTS	
Rd	A	Q	Q'
0	X	X	0
0	X	X	1
1	0	1	0
1	0	1	1
1	1	0	0
1	1	0	1

OUTPUT PULSE WIDTH = 0.7 CR

TC4S30F (TOSHIBA) CHIP PACKAGE
C-MOS 2-INPUT EXCLUSIVE OR GATE



$$Y = A \cdot B + A \cdot \bar{B}$$

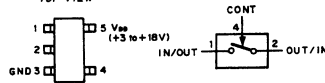
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TYPE	V _{DD}
7S86FU	+2 to +6V
4S30F	+3 to +18V

TC4S66F (TOSHIBA) CHIP PACKAGE
C-MOS BILATERAL ANALOG SWITCH

(SCALE 6/11)
TOP VIEW

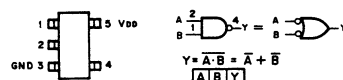


CONT	SWITCH
0	OFF
1	ON

0; LOW LEVEL
1; HIGH LEVEL

SC7S00F (MOTOROLA) CHIP PACKAGE
TC7S00F (TOSHIBA) CHIP PACKAGE
C-MOS 2-INPUT NAND GATE

(SCALE 6/11)
TOP VIEW



$$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$$

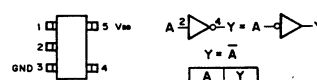
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TYPE	V _{DD}
7S00F	+2 to +6V
4S11F 4SU11F	+3 to +18V

SC7S04F (MOTOROLA) CHIP PACKAGE
TC4S69F (TOSHIBA) CHIP PACKAGE
TC7S04F (TOSHIBA) CHIP PACKAGE
C-MOS INVERTER

(SCALE 6/11)
TOP VIEW



$$Y = \bar{A}$$

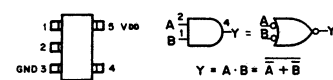
A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

TYPE	V _{DD}
7S04F 7SU04F	+2 to +6V
4S69F 4SU69F	+3 to +18V

TC7S08F (TOSHIBA) CHIP PACKAGE
C-MOS 2-INPUT AND GATE

(SCALE 6/11)
TOP VIEW



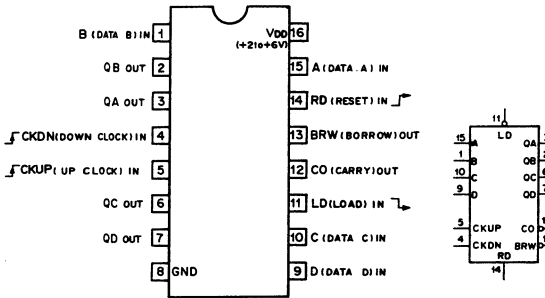
$$Y = A \cdot B = \overline{\overline{A} + \overline{B}}$$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

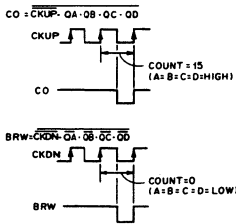
TYPE	V _{DD}
7S08F 7SU08FU	+2 to +6V
4S81F 14S81F	+3 to +18V

TC74HC193AF (TOSHIBA) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT UP/DOWN COUNTER
- TOP VIEW -



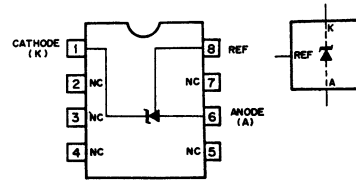
CONTROL INPUT				MODE
RD	LD	CKUP	CKDN	
1	X	X	X	RESET TO ZERO
0	0	X	X	PRESET
0	1	1	1	UP COUNT
0	1	1	0	DOWN COUNT
0	1	1	1	NO COUNT

COUNT	OUTPUT			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

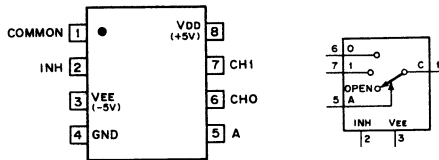


0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

TL431CPS (TI) FLAT PACKAGE
ADJUSTABLE PRECISION SHUNT REGULATOR
- TOP VIEW -



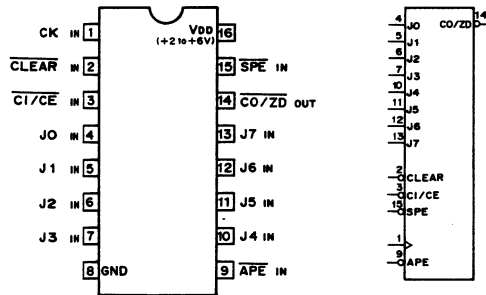
TC4W53F (TOSHIBA) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -



CONT. INPUT		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

TC74HC40103AF (TOSHIBA) FLAT PACKAGE
C-MOS 8-BIT BINARY PROGRAMABLE DOWN COUNTER
- TOP VIEW -

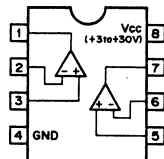


CONTROL INPUT				MODE	FUNCTION
CLEAR	APE	SPE	CI/CE		
1	1	1	1	NO COUNT	Count does not occur even if clock signal is applied.
1	1	1	0	COUNT	Count down occurs at the rising of clock signal.
1	1	0	X	PRESET (SYNCHRONOUS)	PI terminal data is preset at the rising of clock signal.
1	0	X	X	PRESET (ASYNCHRONOUS)	PI terminal data is asynchronously preset to clock signal.
0	X	X	X	CLEAR	The maximum number of count is set (asynchronous).

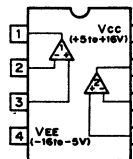
0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

APE : ASYNCHRONOUS PRESET ENABLE
CI/CE : DONT CLOCK
CK : CLOCK
CLEAR : CONTROL INPUT
CO/ZD : OUTPUT
JO~J8 : INPUT
SPE : SYNCHRONOUS PRESET ENABLE

UPC358G2 (NEC) FLAT PACKAGE
DUAL OPERATIONAL AMPLIFIERS
- TOP VIEW -



UPC814G2-1 (NEC) FLAT PACKAGE
TTL-DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



SECTION D REPAIR PARTS

[NOTE]

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- All resistors are in ohms.

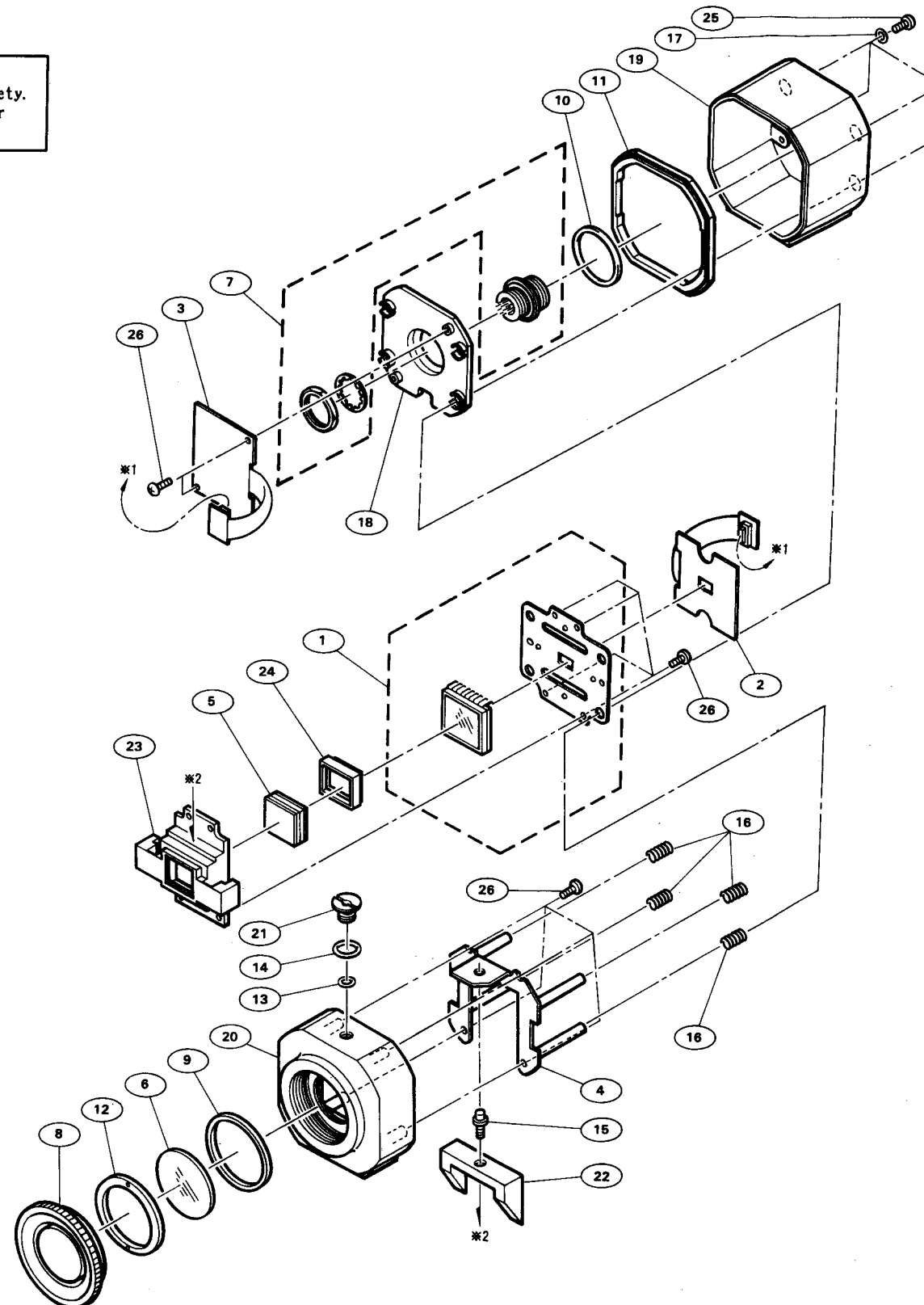
- Items marked "o" in the SP column are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark Δ are critical for safety. Replace only with part number specified.

EXPLODED VIEW AND PARTS LIST

Camera Head Unit

No.	Part No.	SP Description
1	A-8310-215-A s	BRACKET ASSY (N), CCD SERVICE :DXC-C1
	A-8310-216-A s	BRACKET ASSY (P), CCD SERVICE :DXC-C1MDP
2	A-8276-800-A o	MOUNTED CIRCUIT BOARD, BI-72
3	A-8276-801-A o	MOUNTED CIRCUIT BOARD, CN-823
4	X-3167-297-1 o	RETAINER (B) ASSY
5	1-547-381-12 s	FILTER BLOCK, OPTICAL
6	1-547-682-11 s	COVER, OPTICAL DUST
7	1-764-315-11 s	CONNECTOR (ROUND TYPE) 12P
8	2-042-385-00 s	CAP, C MOUNT
9	3-183-059-01 s	RUBBER (2), SEAL
10	3-183-060-01 s	RUBBER (3), SEAL
11	3-183-062-01 s	RUBBER (1), SEAL
12	3-183-063-01 o	RING, RETAINER
13	3-183-064-01 s	RING (DIA. 2.8), O
14	3-183-073-01 s	RING (DIA. 6), O
15	3-183-074-01 s	SCREW, ADJUSTMENT
16	3-183-075-01 s	SPRING, COMPRESSION
17	3-183-091-01 s	RING (DIA. 2.5), O
18	3-183-093-02 o	PANEL, CHU CONNECTOR
19	3-183-097-02 o	PANEL, CHU REAR
20	3-183-098-02 o	PANEL, CHU FRONT
21	3-183-576-02 o	CLAMP, RUBBER SEAL
22	3-183-861-01 o	SLIDER
23	3-183-862-01 o	CASE, CCD
24	3-725-177-01 o	RUBBER, SEAL
25	7-621-773-95 s	SCREW +B 2.6X6
26	7-627-553-47 s	SCREW,PRECISION +P 2X4



CCU

CCU

Camera Control Unit

No. Part No. SP Description

- 51 A-8274-358-A o MOUNTED CIRCUIT BOARD, PS-308 (N)
:DXC-C1
A-8274-361-A o MOUNTED CIRCUIT BOARD, PS-308 (P)
:DXC-C1MDP
- 52 A-8275-425-A o MOUNTED CIRCUIT BOARD, CN-824
- 53 A-8275-427-A o MOUNTED CIRCUIT BOARD, TG-126 (N)
:DXC-C1
A-8275-430-A o MOUNTED CIRCUIT BOARD, TG-126 (P)
:DXC-C1MDP
- 54 A-8275-428-A o MOUNTED CIRCUIT BOARD, PR-181 (N)
:DXC-C1
A-8275-431-A o MOUNTED CIRCUIT BOARD, PR-181 (P)
:DXC-C1MDP
- 55 A-8276-802-A o MOUNTED CIRCUIT BOARD, SW-600
- 56 A-8276-803-A o MOUNTED CIRCUIT BOARD, CN-825
- 57 A-8276-804-A o MOUNTED CIRCUIT BOARD, SW-599
- 58 X-3167-386-1 o PANEL ASSY, CCU FRONT
- 59 X-3682-814-0 s KNOB ASSY, CONTROL
- 60 X-4801-204-0 o TERMINAL ASSY

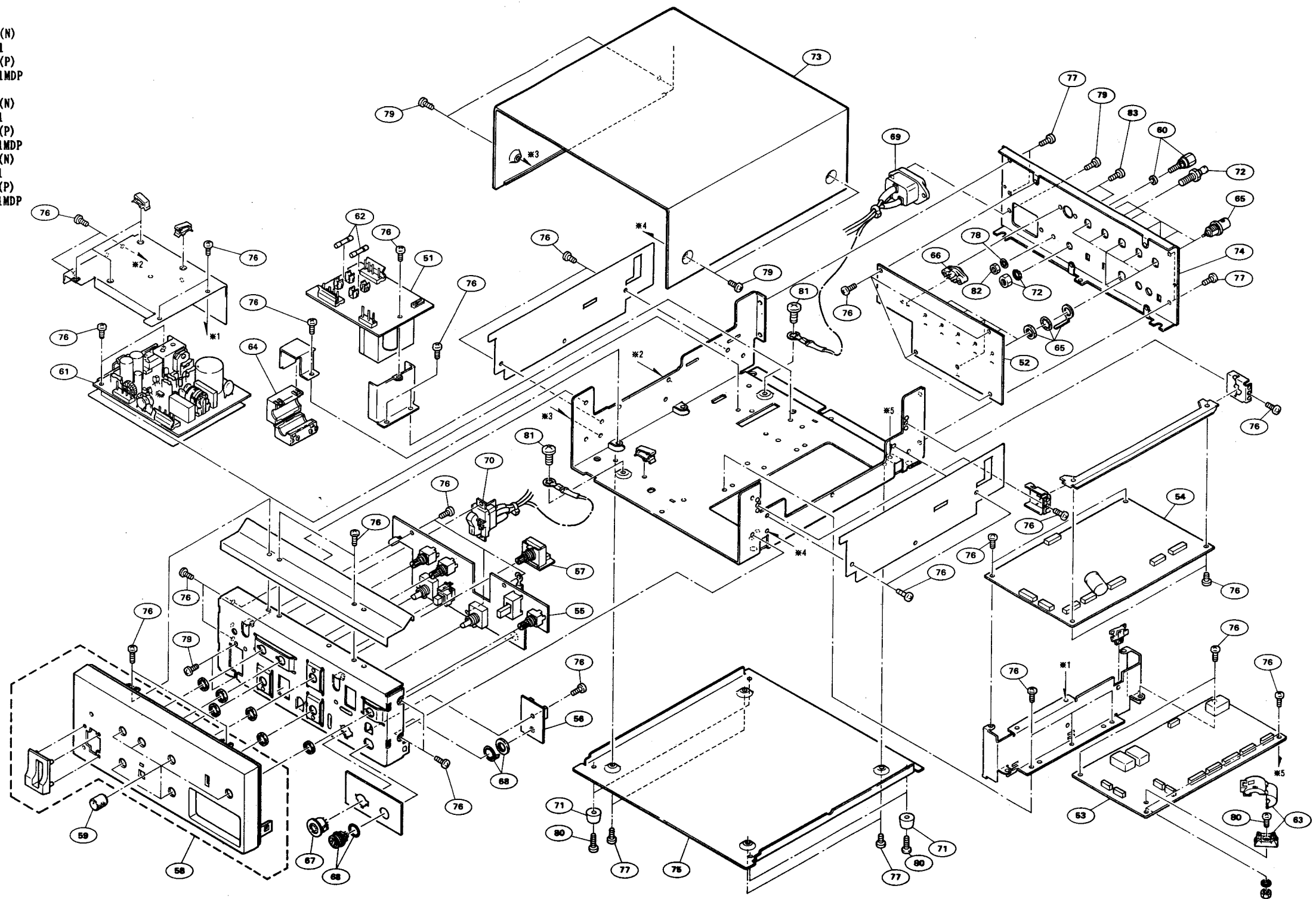
- 61 Δ1-413-921-11 s SWITCHING REGULATOR
- 62 Δ1-532-743-11 s FUSE, GLASS TUBE :DXC-C1
Δ1-576-225-11 s FUSE (H.B.C.) :DXC-C1MDP
- 63 1-543-619-11 s CORE, RING
- 64 1-543-653-11 s CORE ASSY, BEAD
- 65 1-562-261-51 s CONNECTOR, COAXIAL (BNC)

- 66 1-565-301-11 s CONNECTOR, ROUD TYPE 4P
- 67 1-565-653-11 s CONNECTOR, SMALL TYPE 8P
- 68 1-764-749-11 s SOCKET, CONNECTOR 12P
- 69 Δ1-952-991-11 o HARNESS (AC)
- 70 Δ1-952-992-11 o HARNESS (PSW)

- 71 2-092-326-99 s FOOT, RUBBER
- 72 3-175-740-01 o TERMINAL
- 73 3-183-099-02 o COVER
- 74 3-183-100-01 o PANEL, CCU REAR
- 75 3-183-103-01 o PLATE, BOTTOM

- 76 7-621-773-86 s SCREW +B 2.6X4
- 77 7-621-775-10 s SCREW +B 2.6X4
- 78 7-623-422-07 s LW3, TYPE B
- 79 7-682-547-09 s SCREW +B 3X6
- 80 7-682-548-09 s SCREW +B 3X8

- 81 7-682-559-04 s SCREW +B 4X5
- 82 7-684-023-04 s N3, TYPE 2
- 83 7-685-533-19 s SCREW +BTP 2.6X6 TYPE2 N-S



ELECTRICAL PARTS LIST

- Safety Related Components Warning.
Components identified by Δ marking on the schematic diagrams and repair parts list are critical to safe operation. Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.
- Replacement Parts supplied from Sony Parts Center will sometimes have a different shape from the original parts. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts". This manual's repair parts list indicates the parts numbers of "the standardized genuine parts at present". Regarding engineering parts changes in our engineering department refer to Sony service bulletins and service manual supplements.
- Items marked "o" in the SP column of the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• Abbreviations

Ref. No.	Description
C□□, CV□□	CAPACITOR
R□□, RV□□	RESISTOR

- Units for Capacitors, Inductors and Resistors.
The following units are assumed in schematic diagrams and repair parts list unless otherwise specified:
Capacitors: μ F or pF
Inductors : μ H
Resistors : Ω

BI-72 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8276-800-A	o MOUNTED CIRCUIT BOARD, BI-72
C1	1-162-964-11	s CERAMIC 0.001uF 10% 50V
C2	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C3	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C4	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C5	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C6	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C7	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C8	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
CN16	1-691-966-21	s CONNECTOR, BOARD TO BOARD 18P
Q1	8-729-905-24	s TRANSISTOR 2SA1576S
Q2	8-729-143-13	s TRANSISTOR 2SC4176-B34
Q3	8-729-429-98	s TRANSISTOR XP1401
R1	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R2	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R3	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R4	1-216-848-11	s METAL, CHIP 180K 5% 1/16W
R5	1-216-799-11	s METAL 15 5% 1/16W
R6	1-216-805-11	s METAL, CHIP 47 5% 1/16W
R7	1-216-864-11	s METAL, CHIP 0-OHM
R8	1-216-801-11	s METAL 22 0.50% 1/16W
R9	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R10	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R11	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
RV1	1-238-092-11	s RES, ADJ CERMET 47K

CN-825 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8276-803-A	o MOUNTED CIRCUIT BOARD, CN-825
C21	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C22	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C23	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C24	1-162-964-11	s CERAMIC 0.001uF 10% 50V
C25	1-162-964-11	s CERAMIC 0.001uF 10% 50V
C26	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C31	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
CN10	1-695-480-21	o PIN, CONNECTOR (PC BOARD) 2P
CN12	1-695-207-21	o PIN, CONNECTOR (PC BOARD) 6P

CN-823 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8276-801-A	o MOUNTED CIRCUIT BOARD, CN-823
C1	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C2	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C3	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C4	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C5	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C6	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C7	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C8	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C9	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C10	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C11	1-164-156-11	s CERAMIC 0.1uF 25V
D1	8-719-941-86	s DIODE DAN202U
D2	8-719-941-86	s DIODE DAN202U
IC2	8-759-163-76	s IC 74AC11004DB-ELL2000
L1	1-412-031-11	s INDUCTOR CHIP 47uH
Q1	8-729-143-14	s TRANSISTOR 2SC4176-B35
Q2	8-729-143-07	s TRANSISTOR 2SA1610-Y33
Q3	8-729-143-07	s TRANSISTOR 2SA1610-Y33
Q4	8-729-143-14	s TRANSISTOR 2SC4176-B35
R2	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R4	1-216-805-11	s METAL, CHIP 47 5% 1/16W
R5	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R7	1-216-847-11	s METAL, CHIP 150K 5% 1/16W
R8	1-216-805-11	s METAL, CHIP 47 5% 1/16W
R10	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R11	1-216-801-11	s METAL 22 0.50% 1/16W
R12	1-216-801-11	s METAL 22 0.50% 1/16W
R13	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R14	1-216-819-11	s METAL, CHIP 680 5% 1/16W
R15	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W

CN-824 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8275-425-A	o MOUNTED CIRCUIT BOARD, CN-824
C1	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C2	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C3	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C4	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C5	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C6	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C7	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C8	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C9	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C10	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C11	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C12	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C13	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C14	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C15	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C16	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C17	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C18	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C19	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C20	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C21	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C22	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C23	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C24	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C25	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C26	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C27	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C28	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C29	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C30	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C31	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C32	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C33	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C34	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C35	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C36	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
CN4	1-695-890-11	o PIN, CONNECTOR (PC BOARD) 12P
CN5	1-764-080-21	s PIN, CONNECTOR (PC BOARD) 8P
D1	8-719-941-23	s DIODE DA204U
D2	8-719-941-23	s DIODE DA204U
D3	8-719-941-23	s DIODE DA204U
D4	8-719-941-23	s DIODE DA204U
D5	8-719-941-23	s DIODE DA204U
D6	8-719-941-23	s DIODE DA204U
IC1	8-759-031-84	s IC SC7S04F
IC2	8-759-031-84	s IC SC7S04F
L1	1-412-026-11	s INDUCTOR CHIP 1uH
L2	1-412-026-11	s INDUCTOR CHIP 1uH
L3	1-412-026-11	s INDUCTOR CHIP 1uH
L4	1-412-026-11	s INDUCTOR CHIP 1uH
L5	1-412-026-11	s INDUCTOR CHIP 1uH
L6	1-412-026-11	s INDUCTOR CHIP 1uH
L7	1-410-993-11	s INDUCTOR CHIP 1uH
L8	1-410-993-11	s INDUCTOR CHIP 1uH
L9	1-410-993-11	s INDUCTOR CHIP 1uH

(CN-824 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
L10	1-410-993-11	s INDUCTOR CHIP 1uH
L11	1-410-993-11	s INDUCTOR CHIP 1uH
L12	1-410-993-11	s INDUCTOR CHIP 1uH
L13	1-410-993-11	s INDUCTOR CHIP 1uH
L14	1-410-993-11	s INDUCTOR CHIP 1uH
Q1	8-729-429-44	s TRANSISTOR XP1501
Q2	8-729-905-24	s TRANSISTOR 2SA1576S
Q3	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q4	8-729-905-24	s TRANSISTOR 2SA1576S
Q5	8-729-429-44	s TRANSISTOR XP1501
Q6	8-729-905-24	s TRANSISTOR 2SA1576S
Q7	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q8	8-729-905-24	s TRANSISTOR 2SA1576S
Q9	8-729-429-44	s TRANSISTOR XP1501
Q10	8-729-905-24	s TRANSISTOR 2SA1576S
Q11	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q12	8-729-905-24	s TRANSISTOR 2SA1576S
Q13	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q14	8-729-905-24	s TRANSISTOR 2SA1576S
Q15	8-729-905-24	s TRANSISTOR 2SA1576S
Q16	8-729-429-44	s TRANSISTOR XP1501
Q17	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q18	8-729-905-24	s TRANSISTOR 2SA1576S
Q19	8-729-905-24	s TRANSISTOR 2SA1576S
Q20	8-729-429-44	s TRANSISTOR XP1501
Q21	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q22	8-729-905-24	s TRANSISTOR 2SA1576S
Q23	8-729-905-24	s TRANSISTOR 2SA1576S
Q24	8-729-429-44	s TRANSISTOR XP1501
Q25	8-729-905-24	s TRANSISTOR 2SA1576S
Q26	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q27	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q28	8-729-905-24	s TRANSISTOR 2SA1576S
R1	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R2	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R3	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R4	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R5	1-216-824-11	s METAL, CHIP 1.8K 5% 1/16W
R6	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R7	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R8	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R9	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R10	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R11	1-218-285-11	s METAL, CHIP 75 5% 1/16W
R12	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R13	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R14	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R15	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R16	1-216-824-11	s METAL, CHIP 1.8K 5% 1/16W
R17	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R18	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R19	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R20	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R21	1-216-797-11	s METAL, CHIP 10 5% 1/16W
R22	1-218-285-11	s METAL, CHIP 75 5% 1/16W
R23	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R24	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R25	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W

(CN-824 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R26	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R27	1-216-824-11 s	METAL, CHIP 1.8K 5% 1/16W
R28	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R29	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R30	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R31	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R32	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R33	1-218-285-11 s	METAL, CHIP 75 5% 1/16W
R34	1-218-285-11 s	METAL, CHIP 75 5% 1/16W
R35	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R36	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R37	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R38	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R39	1-216-824-11 s	METAL, CHIP 1.8K 5% 1/16W
R40	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R41	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R42	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R43	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R44	1-218-285-11 s	METAL, CHIP 75 5% 1/16W
R45	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R46	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R47	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R48	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R49	1-216-824-11 s	METAL, CHIP 1.8K 5% 1/16W
R50	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R51	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R52	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R53	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W
R54	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R55	1-218-285-11 s	METAL, CHIP 75 5% 1/16W
R56	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R57	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R58	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R59	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R60	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R61	1-216-824-11 s	METAL, CHIP 1.8K 5% 1/16W
R62	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R63	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R64	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W
R65	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R66	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R67	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R68	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R69	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R70	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R71	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R72	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R73	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R74	1-216-797-11 s	METAL, CHIP 10 5% 1/16W
R75	1-218-664-11 s	METAL, CHIP 68 0.5% 1/16W
R76	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W
RV1	1-223-548-21 s	RES, VAR, CARBON 10K
RV2	1-223-548-21 s	RES, VAR, CARBON 10K
S1	1-692-816-11 s	SWITCH, SLIDE
S2	1-692-816-11 s	SWITCH, SLIDE
S3	1-692-816-11 s	SWITCH, SLIDE

PR-181 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8275-428-A o	MOUNTED CIRCUIT BOARD, PR-181(N) :DXC-C1
1pc	A-8275-431-A o	MOUNTED CIRCUIT BOARD, PR-181(P) :DXC-C1MDP
C1	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C2	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C3	1-164-156-11 s	CERAMIC 0.1uF 25V
C4	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C5	1-164-156-11 s	CERAMIC 0.1uF 25V
C6	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C7	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C8	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C9	1-164-156-11 s	CERAMIC 0.1uF 25V
C10	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C11	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C12	1-164-156-11 s	CERAMIC 0.1uF 25V
C13	1-164-156-11 s	CERAMIC 0.1uF 25V
C14	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C15	1-164-156-11 s	CERAMIC 0.1uF 25V
C16	1-164-156-11 s	CERAMIC 0.1uF 25V
C17	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C18	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C19	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C20	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C21	1-164-156-11 s	CERAMIC 0.1uF 25V
C22	1-164-156-11 s	CERAMIC 0.1uF 25V
C23	1-164-156-11 s	CERAMIC 0.1uF 25V
C24	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C25	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C26	1-164-156-11 s	CERAMIC 0.1uF 25V
C27	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C28	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C29	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C30	1-164-156-11 s	CERAMIC 0.1uF 25V
C31	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C32	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C33	1-164-156-11 s	CERAMIC 0.1uF 25V
C34	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C35	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C36	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V :DXC-C1MDP
C37	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C38	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C39	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C40	1-164-156-11 s	CERAMIC 0.1uF 25V
C41	1-164-156-11 s	CERAMIC 0.1uF 25V
C42	1-164-156-11 s	CERAMIC 0.1uF 25V
C43	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C44	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C45	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C46	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V :DXC-C1
C46	1-164-155-11 s	CERAMIC 75PF 5% 50V :DXC-C1MDP
C47	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V :DXC-C1
C47	1-164-155-11 s	CERAMIC 75PF 5% 50V :DXC-C1MDP
C48	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C49	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C50	1-164-156-11 s	CERAMIC 0.1uF 25V
C51	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V

(PR-181 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C52	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C53	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C54	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V :DXC-C1MDP
C55	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C56	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C57	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C58	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C59	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C60	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C61	1-164-156-11 s	CERAMIC 0.1uF 25V :DXC-C1
C62	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C63	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C64	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V :DXC-C1
C65	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V :DXC-C1
C66	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V :DXC-C1
C67	1-164-156-11 s	CERAMIC 0.1uF 25V :DXC-C1
C68	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C69	1-162-919-11 s	CERAMIC, CHIP 22PF 5% 50V :DXC-C1
C70	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V :DXC-C1
C71	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C72	1-164-156-11 s	CERAMIC 0.1uF 25V :DXC-C1
C73	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V :DXC-C1
C74	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C75	1-164-156-11 s	CERAMIC 0.1uF 25V
C76	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C77	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C78	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C79	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C80	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C81	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C82	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C83	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C84	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C85	1-164-156-11 s	CERAMIC 0.1uF 25V
C86	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C87	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C89	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C90	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C91	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C92	1-164-156-11 s	CERAMIC 0.1uF 25V
C93	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C94	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C95	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C97	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C98	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C99	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C100	1-164-217-11 s	CERAMIC 150PF 5% 50V
C101	1-162-922-11 s	CERAMIC, CHIP 39PF 5% 50V
C102	1-162-957-11 s	CERAMIC 220PF 5% 50V
C103	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C104	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V

(PR-181 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C105	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C106	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C107	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C108	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C109	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C112	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C113	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C114	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C115	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C116	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C117	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C119	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C120	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C121	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C123	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C124	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C125	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C126	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C127	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C130	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C131	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C132	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C133	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C134	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C135	1-164-156-11 s	CERAMIC 0.1uF 25V
C136	1-164-156-11 s	CERAMIC 0.1uF 25V
C137	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C138	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C139	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C140	1-164-156-11 s	CERAMIC 0.1uF 25V
C141	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C142	1-164-156-11 s	CERAMIC 0.1uF 25V
C143	1-164-156-11 s	CERAMIC 0.1uF 25V
C144	1-164-156-11 s	CERAMIC 0.1uF 25V
C145	1-164-156-11 s	CERAMIC 0.1uF 25V
C146	1-164-156-11 s	CERAMIC 0.1uF 25V
C147	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C148	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C149	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C150	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C151	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C152	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C153	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C154	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C155	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C156	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C157	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C158	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C159	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C160	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C161	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C162	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C163	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C164	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C165	1-164-156-11 s	CERAMIC 0.1uF 25V
C166	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C167	1-164-156-11 s	CERAMIC 0.1uF 25V
C168	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C169	1-164-156-11 s	CERAMIC 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP Description
C170	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C171	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C172	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C173	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C174	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C175	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C176	1-164-156-11 s	CERAMIC 0.1uF 25V
C177	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C178	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C179	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C180	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C181	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C182	1-162-957-11 s	CERAMIC 220PF 5% 50V
C183	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C184	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C185	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C186	1-162-927-11 s	CERAMIC, CHIP 100PF 5% 50V
C187	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C188	1-164-156-11 s	CERAMIC 0.1uF 25V
C189	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C190	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C191	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C192	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C193	1-162-921-11 s	CERAMIC, CHIP 33PF 5% 50V
C194	1-162-921-11 s	CERAMIC, CHIP 33PF 5% 50V
C195	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V :DXC-C1
C196	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C197	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C198	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C199	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C200	1-164-156-11 s	CERAMIC 0.1uF 25V
C201	1-162-921-11 s	CERAMIC, CHIP 33PF 5% 50V
C202	1-162-921-11 s	CERAMIC, CHIP 33PF 5% 50V
C203	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C204	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C205	1-164-156-11 s	CERAMIC 0.1uF 25V
C206	1-164-156-11 s	CERAMIC 0.1uF 25V
C207	1-164-156-11 s	CERAMIC 0.1uF 25V
C208	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C209	1-135-154-21 s	TANTALUM, CHIP 3.3uF 20% 20V
C210	1-164-156-11 s	CERAMIC 0.1uF 25V
C211	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C212	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C213	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C214	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C215	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C216	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C217	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C218	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C219	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C220	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C221	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C222	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C223	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C224	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C225	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C226	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C227	1-135-166-21 s	TANTALUM, CHIP 47uF 10% 10V
C228	1-135-166-21 s	TANTALUM, CHIP 47uF 10% 10V

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Ref. No. or Q'ty	Part No.	SP Description
C229	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C230	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C231	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C232	1-126-927-11 s	ELECT 2200uF 20% 10V
C233	1-135-155-21 s	TANTAL CHIP 4.7uF 10% 16V
C234	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
CN43	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN44	1-695-889-21 s	PIN, CONNECTOR (PC BOARD) 10P
CN45	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN46	1-695-889-21 s	PIN, CONNECTOR (PC BOARD) 10P
CN47	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN48	1-764-081-21 s	PIN, CONNECTOR (PC BOARD) 9P
CN49	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN50	1-580-756-21 o	PIN, CONNECTOR 7P
D3	8-719-941-86 s	DIODE DAN202U :DXC-C1MDP
D4	8-719-941-86 s	DIODE DAN202U :DXC-C1MDP
D5	8-719-404-40 s	DIODE MA121
D6	8-719-404-49 s	DIODE MA111
D7	8-719-404-40 s	DIODE MA121
D8	8-719-941-86 s	DIODE DAN202U
D10	8-719-404-40 s	DIODE MA121
D11	8-719-404-40 s	DIODE MA121
D12	8-719-404-49 s	DIODE MA111
D13	8-719-404-49 s	DIODE MA111
FL1	1-236-206-11 s	FILTER, BAND PASS :DXC-C1
FL1	1-236-265-21 s	FILTER, BAND PASS :DXC-C1MDP
FL2	1-236-758-21 s	FILTER, LOW PASS (Y. DL) :DXC-C1
FL3	1-236-758-21 s	FILTER, LOW PASS (Y. DL)
FL4	1-415-769-11 s	DELAY LINE, LC
FL5	1-415-763-31 s	DELAY LINE, LC 70nS
FL6	1-415-763-31 s	DELAY LINE, LC 70nS
FL7	1-236-758-21 s	FILTER, LOW PASS (Y. DL)
FL8	1-236-758-21 s	FILTER, LOW PASS (Y. DL) :DXC-C1
FL8	1-236-892-21 s	FILTER, LOW PASS :DXC-C1MDP
FL9	1-236-758-21 s	FILTER, LOW PASS (Y. DL) :DXC-C1
FL9	1-236-892-21 s	FILTER, LOW PASS :DXC-C1MDP
FL10	1-236-758-21 s	FILTER, LOW PASS (Y. DL) :DXC-C1
FL10	1-236-892-21 s	FILTER, LOW PASS :DXC-C1MDP
FL11	1-415-763-31 s	DELAY LINE, LC 70nS
FL12	1-415-763-31 s	DELAY LINE, LC 70nS
FL13	1-415-555-21 s	DELAY LINE, LC 120nS :DXC-C1
FL14	1-415-607-21 s	DELAY LINE, LC 330nS
FL15	1-415-555-21 s	DELAY LINE, LC 120nS
FL16	1-415-607-21 s	DELAY LINE, LC 330nS
FL17	1-415-555-21 s	DELAY LINE, LC 120nS :DXC-C1
FL18	1-415-607-21 s	DELAY LINE, LC 330nS
FL19	1-415-607-21 s	DELAY LINE, LC 330nS
FL20	1-415-607-21 s	DELAY LINE, LC 330nS
IC1	8-759-011-65 s	IC MC74HC4053F
IC2	8-752-056-04 s	IC CXA1609N
IC3	8-752-032-48 s	IC CXA1157M
IC4	8-752-032-48 s	IC CXA1157M
IC5	8-759-234-20 s	IC TC7S08F
IC6	8-759-234-77 s	IC TC4S66F
IC7	8-759-234-77 s	IC TC4S66F
IC8	8-759-114-06 s	IC UPC814G2-1
IC9	8-759-242-64 s	IC TC4W53F
IC10	8-759-209-57 s	IC TC4S69F

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Ref. No. or Q'ty	Part No.	SP Description
IC12	8-759-906-59 s	IC CX22017
IC13	8-759-209-57 s	IC TC4S69F :DXC-C1MDP
IC14	8-759-209-57 s	IC TC4S69F
IC15	8-752-332-69 s	IC CXL5504M :DXC-C1
IC16	8-759-038-46 s	IC SC7S00F
IC17	8-759-011-65 s	IC MC74HC4053F
IC18	8-752-038-99 s	IC CXA1392R
IC19	8-759-114-06 s	IC UPC814G2-1
IC20	8-759-234-20 s	IC TC7S08F
IC21	8-759-011-65 s	IC MC74HC4053F
IC22	8-752-332-69 s	IC CXL5504M
IC23	8-752-332-69 s	IC CXL5504M
IC24	8-752-332-69 s	IC CXL5504M
IC25	8-759-114-06 s	IC UPC814G2-1
IC26	8-759-114-06 s	IC UPC814G2-1
IC27	8-759-011-65 s	IC MC74HC4053F
IC28	8-759-011-65 s	IC MC74HC4053F
IC29	8-759-011-65 s	IC MC74HC4053F
IC30	8-759-038-46 s	IC SC7S00F
IC31	8-759-234-20 s	IC TC7S08F
IC32	8-759-011-65 s	IC MC74HC4053F
IC33	8-759-234-20 s	IC TC7S08F
IC34	8-752-038-99 s	IC CXA1392R
IC35	8-759-242-64 s	IC TC4W53F
IC36	8-759-234-77 s	IC TC4S66F
IC37	8-752-038-99 s	IC CXA1392R
IC38	8-759-242-64 s	IC TC4W53F
IC39	8-759-234-77 s	IC TC4S66F
IC40	8-752-038-99 s	IC CXA1392R
IC41	8-759-242-64 s	IC TC4W53F
IC42	8-759-234-77 s	IC TC4S66F
IC43	8-759-710-82 s	IC NJM2406F
IC44	8-759-925-83 s	IC SN74HC27NS
IC45	8-759-073-47 s	IC TC74HC193AF (EL)
IC46	8-759-927-46 s	IC SN74HC00NS
IC47	8-759-011-65 s	IC MC74HC4053F
IC48	8-759-159-52 s	IC NJU7024M
IC49	8-759-159-54 s	IC NJU7104AM
IC50	8-759-234-77 s	IC TC4S66F
IC51	8-759-098-10 s	IC MC68HC05N4SC406684FU
IC52	8-759-988-82 s	IC MB3773PF
IC53	8-759-098-09 s	IC CXD8822Q
IC54	8-759-942-27 s	IC MB88313PF
IC55	8-759-635-27 s	IC M62352GP-E1
IC56	8-759-234-77 s	IC TC4S66F
IC57	8-759-234-77 s	IC TC4S66F
IC58	8-759-234-77 s	IC TC4S66F
IC59	8-759-234-77 s	IC TC4S66F
IC60	8-759-234-77 s	IC TC4S66F
IC61	8-759-234-77 s	IC TC4S66F
IC62	8-759-209-57 s	IC TC4S69F
IC63	8-759-234-20 s	IC TC7S08F
IC64	8-759-234-77 s	IC TC4S66F
IC65	8-759-234-77 s	IC TC4S66F
IC66	8-759-234-77 s	IC TC4S66F
IC67	8-759-929-26 s	IC TL431CPS
IC68	8-759-929-26 s	IC TL431CPS
IC69	8-759-114-06 s	IC UPC814G2-1
IC70	8-759-114-06 s	IC UPC814G2-1

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Ref. No. or Q'ty	Part No.	SP Description
IC72	8-759-100-94 s	IC UPC358G2
L1	1-412-026-11 s	INDUCTOR CHIP 1uH
L2	1-412-031-11 s	INDUCTOR CHIP 47uH
L3	1-412-026-11 s	INDUCTOR CHIP 1uH
L4	1-412-031-11 s	INDUCTOR CHIP 47uH :DXC-C1
L5	1-412-026-11 s	INDUCTOR CHIP 1uH
L6	1-412-026-11 s	INDUCTOR CHIP 1uH
L7	1-412-031-11 s	INDUCTOR CHIP 47uH
L8	1-412-026-11 s	INDUCTOR CHIP 1uH
L9	1-412-026-11 s	INDUCTOR CHIP 1uH
L10	1-412-031-11 s	INDUCTOR CHIP 47uH
L11	1-412-031-11 s	INDUCTOR CHIP 47uH
L12	1-412-026-11 s	INDUCTOR CHIP 1uH
L13	1-412-026-11 s	INDUCTOR CHIP 1uH
L14	1-412-031-11 s	INDUCTOR CHIP 47uH
L15	1-412-034-11 s	INDUCTOR CHIP 330uH
L16	1-412-026-11 s	INDUCTOR CHIP 1uH
L17	1-412-034-11 s	INDUCTOR CHIP 330uH
L18	1-412-026-11 s	INDUCTOR CHIP 1uH
L19	1-412-031-11 s	INDUCTOR CHIP 47uH
L20	1-412-031-11 s	INDUCTOR CHIP 47uH
L21	1-412-031-11 s	INDUCTOR CHIP 47uH
LV1	1-414-071-21 s	COIL, VAR
Q1	8-729-427-74 s	TRANSISTOR XP4601
Q2	8-729-427-74 s	TRANSISTOR XP4601
Q3	8-729-427-74 s	TRANSISTOR XP4601
Q4	8-729-427-70 s	TRANSISTOR XP4401
Q5	8-729-427-74 s	TRANSISTOR XP4601
Q6	8-729-427-74 s	TRANSISTOR XP4601
Q7	8-729-427-74 s	TRANSISTOR XP4601
Q8	8-729-427-70 s	TRANSISTOR XP4401
Q9	8-729-427-72 s	TRANSISTOR XP4501
Q10	8-729-427-74 s	TRANSISTOR XP4601
Q11	8-729-905-24 s	TRANSISTOR 2SA1576S
Q12	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q13	8-729-905-24 s	TRANSISTOR 2SA1576S
Q14	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q15	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q16	8-729-427-74 s	TRANSISTOR XP4601
Q17	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q18	8-729-905-24 s	TRANSISTOR 2SA1576S
Q19	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q20	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q21	8-729-427-72 s	TRANSISTOR XP4501 :DXC-C1
Q22	8-729-427-72 s	TRANSISTOR XP4501 :DXC-C1
Q23	8-729-905-24 s	TRANSISTOR 2SA1576S :DXC-C1
Q24	8-729-905-24 s	TRANSISTOR 2SA1576S
Q25	8-729-427-74 s	TRANSISTOR XP4601
Q26	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q27	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q28	8-729-427-74 s	TRANSISTOR XP4601
Q29	8-729-427-72 s	TRANSISTOR XP4501
Q30	8-729-120-28 s	TRANSISTOR 2SC1623-L5L6
Q31	8-729-427-74 s	TRANSISTOR XP4601
Q32	8-729-427-74 s	TRANSISTOR XP4601
Q34	8-729-427-74 s	TRANSISTOR XP4601
Q35	8-729-427-74 s	TRANSISTOR XP4601

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Ref. No. or Q'ty	Part No.	SP Description
Q36	8-729-427-74	s TRANSISTOR XP4601
Q37	8-729-427-74	s TRANSISTOR XP4601
Q38	8-729-427-74	s TRANSISTOR XP4601
Q39	8-729-427-74	s TRANSISTOR XP4601
Q40	8-729-427-74	s TRANSISTOR XP4601
Q41	8-729-427-74	s TRANSISTOR XP4601
Q42	8-729-427-74	s TRANSISTOR XP4601
Q43	8-729-427-72	s TRANSISTOR XP4501
Q44	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q45	8-729-427-74	s TRANSISTOR XP4601
Q46	8-729-427-74	s TRANSISTOR XP4601
Q47	8-729-427-74	s TRANSISTOR XP4601
Q48	8-729-427-72	s TRANSISTOR XP4501
Q49	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q50	8-729-427-74	s TRANSISTOR XP4601
Q51	8-729-427-74	s TRANSISTOR XP4601
Q52	8-729-427-74	s TRANSISTOR XP4601
Q53	8-729-427-74	s TRANSISTOR XP4601
Q54	8-729-427-74	s TRANSISTOR XP4601
Q55	8-729-427-74	s TRANSISTOR XP4601
Q56	8-729-905-24	s TRANSISTOR 2SA1576S
Q57	8-729-427-74	s TRANSISTOR XP4601
Q58	8-729-427-74	s TRANSISTOR XP4601
Q59	8-729-427-70	s TRANSISTOR XP4401
Q60	8-729-427-74	s TRANSISTOR XP4601
Q61	8-729-427-70	s TRANSISTOR XP4401
Q62	8-729-427-74	s TRANSISTOR XP4601
Q63	8-729-427-70	s TRANSISTOR XP4401
Q64	8-729-427-74	s TRANSISTOR XP4601
Q65	8-729-427-70	s TRANSISTOR XP4401
Q66	8-729-427-74	s TRANSISTOR XP4601
Q67	8-729-427-70	s TRANSISTOR XP4401
Q68	8-729-427-72	s TRANSISTOR XP4501
Q69	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q70	8-729-427-74	s TRANSISTOR XP4601
Q71	8-729-427-72	s TRANSISTOR XP4501
Q72	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q73	8-729-427-74	s TRANSISTOR XP4601
Q74	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q75	8-729-429-44	s TRANSISTOR XP1501
Q76	8-729-905-24	s TRANSISTOR 2SA1576S
Q77	8-729-427-74	s TRANSISTOR XP4601
Q78	8-729-427-74	s TRANSISTOR XP4601
Q79	8-729-427-74	s TRANSISTOR XP4601
Q80	8-729-427-74	s TRANSISTOR XP4601
Q81	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q82	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
R1	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R2	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R3	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R4	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R5	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R6	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R7	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R8	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R9	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R10	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R11	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R12	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R13	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R14	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R15	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R16	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R17	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R18	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R19	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R20	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R21	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R22	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R23	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R24	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R25	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R26	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R29	1-216-864-11	s METAL, CHIP 0-OHM
R30	1-216-864-11	s METAL, CHIP 0-OHM
R31	1-216-864-11	s METAL, CHIP 0-OHM
R32	1-216-864-11	s METAL, CHIP 0-OHM
R33	1-216-864-11	s METAL, CHIP 0-OHM
R34	1-216-864-11	s METAL, CHIP 0-OHM
R36	1-216-832-11	s METAL, CHIP 8.2K 5% 1/16W
R37	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R38	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R40	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R42	1-216-832-11	s METAL, CHIP 8.2K 5% 1/16W
R43	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R44	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R45	1-216-864-11	s METAL, CHIP 0-OHM
R49	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R50	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R51	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R52	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R53	1-216-840-11	s METAL, CHIP 39K 5% 1/16W
R54	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R55	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1
R55	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W :DXC-C1MDP
R56	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R57	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R58	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R60	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R61	1-216-699-11	s METAL, 2K 0.50% 1/16W
R63	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R65	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R66	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R67	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W :DXC-C1
R67	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W :DXC-C1MDP
R68	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R69	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R70	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R71	1-216-845-11	s METAL, CHIP 100K 5% 1/16W :DXC-C1
R73	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R74	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R75	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R76	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R77	1-216-841-11	s METAL, CHIP 47K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R78	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R79	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R80	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R81	1-216-839-11 s	METAL, CHIP 33K 5% 1/16W
R82	1-216-818-11 s	METAL, CHIP 560 5% 1/16W
R83	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R84	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R85	1-216-818-11 s	METAL, CHIP 560 5% 1/16W
R86	1-216-834-11 s	METAL, CHIP 12K 5% 1/16W
R87	1-216-818-11 s	METAL, CHIP 560 5% 1/16W
R88	1-216-015-00 s	METAL 39 5% 1/10W
R89	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R90	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W
R92	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R93	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R94	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R95	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R96	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R97	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R99	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R100	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R101	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R102	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R103	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R104	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R105	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W :DXC-C1MDP
R106	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W :DXC-C1MDP
R107	1-216-834-11 s	METAL, CHIP 12K 5% 1/16W
R109	1-216-838-11 s	METAL, CHIP 27K 5% 1/16W
R110	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R111	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R112	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W :DXC-C1
R112	1-216-831-11 s	METAL, CHIP 6.8K 5% 1/16W :DXC-C1MDP
R114	1-216-809-11 s	METAL, CHIP 100 5% 1/16W
R115	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R116	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R117	1-216-699-11 s	METAL 2K 0.50% 1/16W
R118	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R119	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R120	1-216-813-11 s	METAL, CHIP 220 5% 1/16W
R121	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R122	1-216-834-11 s	METAL, CHIP 12K 5% 1/16W
R123	1-216-005-00 s	METAL 15 5% 1/10W
R124	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W :DXC-C1
R125	1-216-835-11 s	METAL, CHIP 15K 5% 1/16W :DXC-C1
R126	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W :DXC-C1
R127	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W :DXC-C1
R128	1-216-835-11 s	METAL, CHIP 15K 5% 1/16W :DXC-C1
R129	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R130	1-216-823-11 s	METAL, CHIP 1.5K 5% 1/16W :DXC-C1
R131	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W :DXC-C1
R132	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W :DXC-C1
R133	1-216-857-11 s	METAL, CHIP 1M 5% 1/16W :DXC-C1
R134	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R135	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R136	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R137	1-216-822-11 s	METAL, CHIP 1.2K 5% 1/16W :DXC-C1

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Ref. No. or Q'ty	Part No.	SP Description
R138	1-216-835-11 s	METAL, CHIP 15K 5% 1/16W :DXC-C1
R139	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R140	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W :DXC-C1
R141	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W :DXC-C1
R142	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R143	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R144	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R145	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R146	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R147	1-216-835-11 s	METAL, CHIP 15K 5% 1/16W
R148	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R149	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R150	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R152	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R153	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1
R154	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R155	1-216-839-11 s	METAL, CHIP 33K 5% 1/16W
R156	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R157	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R158	1-216-836-11 s	METAL, CHIP 18K 5% 1/16W
R159	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R160	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R161	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R162	1-216-835-11 s	METAL, CHIP 15K 5% 1/16W
R163	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R164	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R165	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R166	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R167	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R171	1-216-817-11 s	METAL, CHIP 470 5% 1/16W
R172	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R173	1-216-847-11 s	METAL, CHIP 150K 5% 1/16W
R175	1-216-864-11 s	METAL, CHIP 0-OHM :DXC-C1
R176	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W :DXC-C1MDP
R177	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W :DXC-C1MDP
R178	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R179	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R180	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R181	1-216-820-11 s	METAL, CHIP 820 5% 1/16W
R182	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R183	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R184	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R185	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R186	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R187	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R188	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R190	1-216-838-11 s	METAL, CHIP 27K 5% 1/16W
R191	1-216-839-11 s	METAL, CHIP 33K 5% 1/16W
R193	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R194	1-216-820-11 s	METAL, CHIP 820 5% 1/16W
R195	1-216-820-11 s	METAL, CHIP 820 5% 1/16W
R196	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R197	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R198	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R199	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R200	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R201	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R202	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R203	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R204	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R205	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R206	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R207	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R208	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R209	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R210	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R211	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R212	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R213	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R214	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R215	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R216	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R217	1-216-857-11 s	METAL, CHIP 1M 5% 1/16W
R218	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R219	1-216-857-11 s	METAL, CHIP 1M 5% 1/16W
R220	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R221	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R222	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R223	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R224	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R225	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R226	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R227	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R228	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R229	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R230	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R231	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R232	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R233	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R234	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R235	1-216-857-11 s	METAL, CHIP 1M 5% 1/16W
R236	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R237	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R238	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R239	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R240	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R241	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R242	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R243	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R244	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R245	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R246	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R247	1-216-832-11 s	METAL, CHIP 8.2K 5% 1/16W
R248	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R249	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R250	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R251	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R252	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R253	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R254	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R255	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R256	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R257	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R258	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R259	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R260	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R261	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R262	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R263	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R264	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R265	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R266	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R267	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R268	1-216-832-11 s	METAL, CHIP 8.2K 5% 1/16W
R269	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R270	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R271	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R272	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R273	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R274	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R275	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R276	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R277	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R278	1-216-832-11 s	METAL, CHIP 8.2K 5% 1/16W
R279	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R280	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R281	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R282	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R283	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R284	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R285	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R286	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R287	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R288	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R289	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R290	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R291	1-216-838-11 s	METAL, CHIP 27K 5% 1/16W
R292	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R293	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R294	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R295	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R296	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R297	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R298	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R299	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R300	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R301	1-216-826-11 s	METAL, CHIP 2.7K 5% 1/16W
R302	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R303	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R304	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R305	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R306	1-216-837-11 s	METAL, CHIP 22K 5% 1/16W
R307	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R308	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R309	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R310	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R311	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R312	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R313	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R314	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R315	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R316	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R317	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R318	1-216-847-11 s	METAL, CHIP 150K 5% 1/16W
R319	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R320	1-216-830-11 s	METAL, CHIP 5.6K 5% 1/16W
R321	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W

(PR-181 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R322	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R323	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R324	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R325	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R326	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R327	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R328	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R329	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R330	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R331	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R332	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R333	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R334	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R335	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R336	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R337	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R338	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R339	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R340	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R341	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R342	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R343	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R344	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R354	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R355	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R356	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R357	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R358	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R359	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R360	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R361	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R362	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R364	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R365	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R366	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R367	1-216-836-11	s METAL, CHIP 18K 5% 1/16W
R369	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R370	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R371	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R372	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R373	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R374	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1MDP
R375	1-218-708-11	s METAL 4.7K 0.50% 1/16W
R376	1-218-708-11	s METAL 4.7K 0.50% 1/16W
R377	1-218-708-11	s METAL 4.7K 0.50% 1/16W
R378	1-218-729-11	s METAL 36K 0.50% 1/16W
R379	1-218-729-11	s METAL 36K 0.50% 1/16W
R380	1-218-729-11	s METAL 36K 0.50% 1/16W
R381	1-218-873-11	s METAL 12K 0.50% 1/16W
R382	1-218-873-11	s METAL 12K 0.50% 1/16W
R383	1-218-873-11	s METAL 12K 0.50% 1/16W
R384	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R385	1-218-700-11	s METAL 2.2K 0.50% 1/16W
R386	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R387	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R388	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R389	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R390	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R391	1-216-821-11	s METAL, CHIP 1K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R392	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R393	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R394	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R395	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R396	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R397	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R398	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R399	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R400	1-216-828-11	s METAL, CHIP 3.9K 5% 1/16W
R401	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R402	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R403	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R404	1-218-708-11	s METAL 4.7K 0.50% 1/16W
R405	1-218-675-11	s METAL 200 0.50% 1/16W
R406	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R407	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R408	1-218-295-11	s METAL 5.6K 0.50% 1/16W
R409	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R410	1-218-714-11	s METAL 8.2K 0.50% 1/16W
R411	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R412	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R413	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R414	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R415	1-218-700-11	s METAL 2.2K 0.50% 1/16W
R416	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R417	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R418	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R419	1-218-699-11	s METAL 2K 0.50% 1/16W
R420	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R421	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R422	1-216-864-11	s METAL, CHIP 0-OHM
R423	1-218-700-11	s METAL 2.2K 0.50% 1/16W
R424	1-218-707-11	s METAL 4.3K 0.50% 1/16W
R425	1-216-864-11	s METAL, CHIP 0-OHM
R426	1-216-864-11	s METAL, CHIP 0-OHM
R427	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R428	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R429	1-218-699-11	s METAL 2K 0.50% 1/16W
R430	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R431	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R432	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R433	1-218-698-11	s METAL 1.8K 0.50% 1/16W
R434	1-218-716-11	s METAL 10K 0.50% 1/16W
R435	1-216-864-11	s METAL, CHIP 0-OHM
R436	1-216-864-11	s METAL, CHIP 0-OHM
R437	1-218-699-11	s METAL 2K 0.50% 1/16W
R438	1-218-700-11	s METAL 2.2K 0.50% 1/16W
R439	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R440	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R441	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R442	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R443	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R444	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R445	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R446	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R447	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R448	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R449	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R450	1-216-845-11	s METAL, CHIP 100K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R451	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R452	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R453	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R454	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R455	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R456	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R457	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R458	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R459	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R460	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R461	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R462	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R463	1-216-732-11 s	METAL 47K 0.50% 1/16W
R464	1-216-732-11 s	METAL 47K 0.50% 1/16W
R465	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R466	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R467	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R468	1-216-827-11 s	METAL, CHIP 3.3K 5% 1/16W
R469	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R470	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R471	1-216-813-11 s	METAL, CHIP 220 5% 1/16W
R472	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R473	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R474	1-216-732-11 s	METAL 47K 0.50% 1/16W
R475	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R476	1-216-039-00 s	METAL, CHIP 390 5% 1/10W
R477	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R478	1-216-829-11 s	METAL, CHIP 4.7K 5% 1/16W
R479	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R480	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R481	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R482	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R483	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R484	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R485	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R486	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R487	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R488	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R489	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R490	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R491	1-216-838-11 s	METAL, CHIP 27K 5% 1/16W
R492	1-216-838-11 s	METAL, CHIP 27K 5% 1/16W
R493	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R494	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R495	1-216-846-11 s	METAL, CHIP 120K 5% 1/16W
R496	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R497	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R498	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R499	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R500	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R501	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R502	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R503	1-216-841-11 s	METAL, CHIP 47K 5% 1/16W
R504	1-216-857-11 s	METAL, CHIP 1M 5% 1/16W
R505	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R506	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R507	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W
R508	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R509	1-216-825-11 s	METAL, CHIP 2.2K 5% 1/16W

(PR-181 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R510	1-216-821-11 s	METAL, CHIP 1K 5% 1/16W
R511	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R512	1-216-833-11 s	METAL, CHIP 10K 5% 1/16W
R513	1-216-845-11 s	METAL, CHIP 100K 5% 1/16W
R514	1-216-864-11 s	METAL, CHIP 0-OHM :DXC-C1MDP
R515	1-216-864-11 s	METAL, CHIP 0-OHM :DXC-C1MDP
R516	1-216-864-11 s	METAL, CHIP 0-OHM :DXC-C1MDP
RV1	1-238-092-11 s	RES, ADJ CERMET 47K
RV2	1-238-092-11 s	RES, ADJ CERMET 47K
RV3	1-238-092-11 s	RES, ADJ CERMET 47K
RV4	1-238-089-11 s	RES, ADJ CERMET 4.7K
RV5	1-238-087-11 s	RES, ADJ CERMET 1K
RV6	1-238-087-11 s	RES, ADJ CERMET 1K
RV7	1-238-089-11 s	RES, ADJ CERMET 4.7K
RV8	1-238-089-11 s	RES, ADJ CERMET 4.7K
RV9	1-238-090-11 s	RES, ADJ CERMET 10K
RV10	1-238-088-11 s	RES, ADJ, CERMET 2.2K
RV11	1-238-092-11 s	RES, ADJ CERMET 47K
RV12	1-238-092-11 s	RES, ADJ CERMET 47K
RV13	1-238-092-11 s	RES, ADJ CERMET 47K
RV14	1-238-092-11 s	RES, ADJ CERMET 47K
RV15	1-238-092-11 s	RES, ADJ CERMET 47K
RV16	1-238-092-11 s	RES, ADJ CERMET 47K
RV17	1-238-092-11 s	RES, ADJ CERMET 47K
RV18	1-238-092-11 s	RES, ADJ CERMET 47K
RV19	1-238-092-11 s	RES, ADJ CERMET 47K
RV20	1-238-092-11 s	RES, ADJ CERMET 47K
RV21	1-238-092-11 s	RES, ADJ CERMET 47K
RV22	1-238-092-11 s	RES, ADJ CERMET 47K
RV23	1-238-092-11 s	RES, ADJ CERMET 47K
RV24	1-238-092-11 s	RES, ADJ CERMET 47K
RV25	1-238-092-11 s	RES, ADJ CERMET 47K
RV26	1-238-092-11 s	RES, ADJ CERMET 47K
RV27	1-238-092-11 s	RES, ADJ CERMET 47K
RV28	1-238-092-11 s	RES, ADJ CERMET 47K
RV29	1-238-090-11 s	RES, ADJ CERMET 10K
RV30	1-238-089-11 s	RES, ADJ CERMET 4.7K
RV31	1-238-089-11 s	RES, ADJ CERMET 4.7K
RV32	1-238-087-11 s	RES, ADJ CERMET 1K
S1	1-571-249-11 s	SWITCH, SLIDE

PS-308 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8274-358-A	o MOUNTED CIRCUIT BOARD, PS-308(N) :DXC-C1
1pc	A-8274-361-A	o MOUNTED CIRCUIT BOARD, PS-308(P) :DXC-C1MDP
4pcs	1-533-146-00	o HOLDER, FUSE
1pc	3-167-756-01	s SHEET, INSULATING, DD
C1	1-126-602-11	s ELECT 3.3uF 20% 50V
C2	1-126-602-11	s ELECT 3.3uF 20% 50V
C3	1-126-205-11	s ELECT 47uF 20% 6.3V
C4	1-126-399-11	s ELECT, CHIP 10uF 20% 35V
C5	1-126-399-11	s ELECT, CHIP 10uF 20% 35V
C6	1-126-205-11	s ELECT 47uF 20% 6.3V
C7	1-126-205-11	s ELECT 47uF 20% 6.3V
C8	1-126-205-11	s ELECT 47uF 20% 6.3V
C10	1-124-557-11	s ELECT 1000uF 20% 25V
CN21	1-764-603-11	o PIN, CONNECTOR (PC BOARD) 4P
CN22	1-764-603-11	o PIN, CONNECTOR (PC BOARD) 4P
CN23	1-764-602-11	o PIN, CONNECTOR (PC BOARD) 3P
CN24	1-695-208-21	o PIN, CONNECTOR (PC BOARD) 7P
L1	1-412-026-11	s INDUCTOR CHIP 1uH
L2	1-412-026-11	s INDUCTOR CHIP 1uH
L3	1-412-031-11	s INDUCTOR CHIP 47uH
L4	1-412-031-11	s INDUCTOR CHIP 47uH
L5	1-412-031-11	s INDUCTOR CHIP 47uH
PU1	1-467-453-11	s CONVERTER UNIT, DC-DC

SW-599 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8276-804-A	o MOUNTED CIRCUIT BOARD, SW-599
C27	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C28	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C29	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C30	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
CN9	1-952-756-11	o HARNESS, SUB (TG-SW(1))
S4	1-692-814-11	s SWITCH, DIGITAL CODE OUTPUT

SW-600 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8276-802-A	o MOUNTED CIRCUIT BOARD, SW-600
C1	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C2	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C3	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C4	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C5	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C6	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C7	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C8	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C9	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C10	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C11	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C12	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C13	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C14	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C15	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C16	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C17	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C18	1-163-275-11	s CERAMIC, CHIP 0.001uF 5% 50V
C19	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C20	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
CN6	1-952-755-11	o HARNESS, SUB (TG-SW(2))
CN7	1-952-753-11	o HARNESS, SUB (PR-SW(2))
CN8	1-952-754-11	o HARNESS, SUB (PR-SW(1))
D1	8-719-811-44	s DIODE TLG114A
D2	8-719-311-15	s DIODE SEL1422G
L1	1-410-993-11	s INDUCTOR CHIP 1uH
L2	1-410-993-11	s INDUCTOR CHIP 1uH
L3	1-410-993-11	s INDUCTOR CHIP 1uH
L4	1-410-993-11	s INDUCTOR CHIP 1uH
L5	1-410-993-11	s INDUCTOR CHIP 1uH
L6	1-410-993-11	s INDUCTOR CHIP 1uH
L7	1-410-993-11	s INDUCTOR CHIP 1uH
RV1	1-223-547-11	s RES, VAR, CARBON 10K
RV2	1-223-547-11	s RES, VAR, CARBON 10K
RV3	1-223-547-11	s RES, VAR, CARBON 10K
S1	1-572-827-11	s SWITCH, PUSH
S2	1-692-815-11	s SWITCH, ROTARY
S3	1-516-637-00	s SWITCH, SLIDE
S5	1-692-815-11	s SWITCH, ROTARY

TG-126 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8275-427-A	o MOUNTED CIRCUIT BOARD, TG-126(N) :DXC-C1
1pc	A-8275-430-A	o MOUNTED CIRCUIT BOARD, TG-126(P) :DXC-C1MDP
C1	1-164-357-11	s CERAMIC 1000PF 5% 50V
C2	1-126-193-11	s ELECT 1uF 20% 50V
C4	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C5	1-126-205-11	s ELECT 47uF 20% 6.3V
C6	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C7	1-164-227-11	s CERAMIC 0.022uF 10% 25V
C8	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C9	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C10	1-126-205-11	s ELECT 47uF 20% 6.3V
C11	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C12	1-164-156-11	s CERAMIC 0.1uF 25V
C13	1-126-193-11	s ELECT 1uF 20% 50V
C14	1-164-005-11	s CERAMIC, CHIP 0.47uF 25V
C15	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C16	1-126-204-11	s ELECT 47uF 20% 16V
C17	1-126-399-11	s ELECT, CHIP 10uF 20% 35V
C18	1-126-193-11	s ELECT 1uF 20% 50V
C19	1-104-663-11	s ELECT 33uF 20% 25V
C20	1-126-204-11	s ELECT 47uF 20% 16V
C24	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C26	1-126-205-11	s ELECT 47uF 20% 6.3V
C27	1-135-155-21	s TANTAL CHIP 4.7uF 10% 16V
C28	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C29	1-126-204-11	s ELECT 47uF 20% 16V
C30	1-164-156-11	s CERAMIC 0.1uF 25V
C32	1-164-227-11	s CERAMIC 0.022uF 10% 25V
C33	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C34	1-126-193-11	s ELECT 1uF 20% 50V
C35	1-164-156-11	s CERAMIC 0.1uF 25V
C36	1-126-193-11	s ELECT 1uF 20% 50V
C37	1-126-399-11	s ELECT, CHIP 10uF 20% 35V
C38	1-135-154-21	s TANTALUM, CHIP 3.3uF 20% 20V
C39	1-164-156-11	s CERAMIC 0.1uF 25V
C40	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C41	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C42	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C43	1-126-925-11	s ELECT 470uF 20% 10V
C44	1-126-204-11	s ELECT 47uF 20% 16V
C45	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C46	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C47	1-162-919-11	s CERAMIC 22PF 5% 50V :DXC-C1MDP
C47	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V :DXC-C1
C48	1-164-005-11	s CERAMIC, CHIP 0.47uF 25V
C49	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C50	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C51	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C52	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C53	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C54	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C55	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C56	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C57	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C58	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C59	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C60	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V

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Ref. No. or Q'ty	Part No.	SP Description
C61	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C62	1-162-925-11	s CERAMIC, CHIP 68PF 5% 50V
C63	1-135-161-21	s TANTALUM, CHIP 22uF 10% 10V
C64	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C65	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C66	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C67	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C68	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C69	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C70	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C71	1-162-927-11	s CERAMIC, CHIP 100PF 5% 50V
C72	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C73	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C74	1-135-161-21	s TANTALUM, CHIP 22uF 10% 10V
C75	1-164-676-11	s CERAMIC 2200PF 5% 16V
C76	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C77	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C78	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C79	1-162-915-11	s CERAMIC, CHIP 10PF 5PF 50V
C80	1-164-156-11	s CERAMIC 0.1uF 25V
C81	1-162-919-11	s CERAMIC, CHIP 22PF 5% 50V
C82	1-162-970-11	s CERAMIC, CHIP 0.01uF 10% 25V
C83	1-135-165-11	s TANTALUM, CHIP 33uF 10% 16V
C84	1-164-156-11	s CERAMIC 0.1uF 25V
C85	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C87	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C88	1-135-165-11	s TANTALUM, CHIP 33uF 10% 16V
C89	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C90	1-164-156-11	s CERAMIC 0.1uF 25V
C91	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C93	1-164-156-11	s CERAMIC 0.1uF 25V
C94	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C95	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C96	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C97	1-164-156-11	s CERAMIC 0.1uF 25V
C98	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C99	1-164-156-11	s CERAMIC 0.1uF 25V
C100	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C101	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C102	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C103	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C104	1-164-156-11	s CERAMIC 0.1uF 25V
C105	1-162-923-11	s CERAMIC, CHIP 47PF 5% 50V
C106	1-164-156-11	s CERAMIC 0.1uF 25V
C107	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C108	1-164-156-11	s CERAMIC 0.1uF 25V
C109	1-164-156-11	s CERAMIC 0.1uF 25V
C110	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C111	1-164-156-11	s CERAMIC 0.1uF 25V
C112	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C113	1-164-156-11	s CERAMIC 0.1uF 25V
C114	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V
C115	1-164-156-11	s CERAMIC 0.1uF 25V
C116	1-164-357-11	s CERAMIC 1000PF 5% 50V
C117	1-135-157-21	s TANTALUM, CHIP 10uF 10% 6.3V
C118	1-164-156-11	s CERAMIC 0.1uF 25V
C119	1-164-156-11	s CERAMIC 0.1uF 25V
C120	1-164-156-11	s CERAMIC 0.1uF 25V
C121	1-135-177-21	s TANTALUM, CHIP 1uF 10% 20V

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Ref. No. or Q'ty	Part No.	SP Description
C122	1-164-156-11 s	CERAMIC 0.1uF 25V
C123	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C124	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C125	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C126	1-164-156-11 s	CERAMIC 0.1uF 25V
C127	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C128	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C129	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C130	1-164-156-11 s	CERAMIC 0.1uF 25V
C131	1-164-156-11 s	CERAMIC 0.1uF 25V
C132	1-164-156-11 s	CERAMIC 0.1uF 25V
C133	1-164-156-11 s	CERAMIC 0.1uF 25V
C134	1-164-357-11 s	CERAMIC 1000PF 5% 50V
C135	1-164-156-11 s	CERAMIC 0.1uF 25V
C137	1-164-156-11 s	CERAMIC 0.1uF 25V
C138	1-162-919-11 s	CERAMIC, CHIP 22PF 5% 50V
C140	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C141	1-164-156-11 s	CERAMIC 0.1uF 25V
C142	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C143	1-164-156-11 s	CERAMIC 0.1uF 25V
C144	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C145	1-164-156-11 s	CERAMIC 0.1uF 25V
C146	1-164-156-11 s	CERAMIC 0.1uF 25V
C147	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C148	1-164-357-11 s	CERAMIC 1000PF 5% 50V
C149	1-164-156-11 s	CERAMIC 0.1uF 25V
C150	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C151	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C152	1-164-156-11 s	CERAMIC 0.1uF 25V
C153	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C154	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C155	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C156	1-164-156-11 s	CERAMIC 0.1uF 25V
C157	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C158	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C159	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C160	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C161	1-164-156-11 s	CERAMIC 0.1uF 25V
C163	1-164-357-11 s	CERAMIC 1000PF 5% 50V
C164	1-164-156-11 s	CERAMIC 0.1uF 25V
C165	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C166	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C167	1-164-156-11 s	CERAMIC 0.1uF 25V
C168	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C169	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C170	1-135-149-21 s	TANTALUM, CHIP 2.2uF 10% 10V
C171	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C172	1-162-919-11 s	CERAMIC, CHIP 22PF 5% 50V
C173	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C174	1-164-156-11 s	CERAMIC 0.1uF 25V
C175	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C176	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C177	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C178	1-126-399-11 s	ELECT, CHIP 10uF 20% 35V
C179	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C180	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C181	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C182	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C183	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V

:DXC-C1MDP

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Ref. No. or Q'ty	Part No.	SP Description
C184	1-164-380-11 s	CERAMIC 51PF 5% 50V
C185	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C186	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C187	1-135-157-21 s	TANTALUM, CHIP 10uF 10% 6.3V
C188	1-164-357-11 s	CERAMIC 1000PF 5% 50V
C189	1-135-177-21 s	TANTALUM, CHIP 1uF 10% 20V
C190	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C191	1-164-357-11 s	CERAMIC 1000PF 5% 50V
C192	1-162-970-11 s	CERAMIC, CHIP 0.01uF 10% 25V
C193	1-164-156-11 s	CERAMIC 0.1uF 25V
C195	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C196	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C197	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C198	1-162-923-11 s	CERAMIC, CHIP 47PF 5% 50V
C199	1-135-149-21 s	TANTALUM, CHIP 2.2uF 10% 10V
C200	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C201	1-164-156-11 s	CERAMIC 0.1uF 25V
C202	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C203	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C204	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C205	1-135-161-21 s	TANTALUM, CHIP 22uF 10% 10V
C206	1-126-204-11 s	ELECT 47uF 20% 16V
C207	1-126-204-11 s	ELECT 47uF 20% 16V
C208	1-126-204-11 s	ELECT 47uF 20% 16V
C209	1-126-204-11 s	ELECT 47uF 20% 16V
C211	1-135-165-11 s	TANTALUM, CHIP 33uF 10% 16V
C212	1-135-165-11 s	TANTALUM, CHIP 33uF 10% 16V
C213	1-162-915-11 s	CERAMIC, CHIP 10PF 5PF 50V
C214	1-126-927-11 s	ELECT 220uF 20% 10V
CN31	1-764-080-21 s	PIN, CONNECTOR (PC BOARD) 8P
CN32	1-695-889-21 s	PIN, CONNECTOR (PC BOARD) 10P
CN33	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN34	1-695-889-21 s	PIN, CONNECTOR (PC BOARD) 10P
CN35	1-695-890-21 o	PIN, CONNECTOR (PC BOARD) 12P
CN36	1-695-207-21 o	PIN, CONNECTOR (PC BOARD) 6P
CN37	1-695-208-21 o	PIN, CONNECTOR (PC BOARD) 7P
CN38	1-695-207-21 o	PIN, CONNECTOR (PC BOARD) 6P
CN39	1-750-635-21 o	PIN, CONNECTOR (PC BOARD) 5P
CN40	1-695-480-21 o	PIN, CONNECTOR (PC BOARD) 2P
CN41	1-695-208-21 o	PIN, CONNECTOR (PC BOARD) 7P
CP1	1-577-181-11 s	OSCILLATOR, CRYSTAL 28.63636MHz :DXC-C1
CP1	1-577-182-11 s	OSCILLATOR, CRYSTAL 28.375MHz :DXC-C1MP
CP2	1-577-181-11 s	OSCILLATOR, CRYSTAL 28.63636MHz :DXC-C1
CP2	1-577-182-11 s	OSCILLATOR, CRYSTAL 28.375MHz :DXC-C1MP
CP3	1-577-089-11 s	OSCILLATOR, CRYSTAL 14.31818MHz :DXC-C1
CP3	1-577-183-11 s	OSCILLATOR, CRYSTAL 17.734475MHz :DXC-C1MP
D1	8-719-941-23 s	DIODE DA204U
D2	8-719-941-09 s	DIODE DAP202U
D3	8-719-941-09 s	DIODE DAP202U
D4	8-719-988-07 s	DIODE RB400D
D5	8-719-988-07 s	DIODE RB400D

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Ref. No. or Q'ty	Part No.	SP Description
D6	8-719-941-23	s DIODE DA204U
D7	8-719-941-09	s DIODE DAP202U
FL1	1-236-894-11	s FILTER, LOW PASS
FL2	1-415-767-11	s DELAY LINE, LC :DXC-C1
FL2	1-415-768-21	s DELAY LINE, LC :DXC-C1MDP
FL3	1-236-758-21	s FILTER, LOW PASS (Y.DL) :DXC-C1
FL3	1-236-892-21	s FILTER, LOW PASS :DXC-C1MDP
FL4	1-236-894-11	s FILTER, LOW PASS
FL5	1-236-206-11	s FILTER, BAND PASS :DXC-C1
FL5	1-236-265-21	s FILTER, BAND PASS :DXC-C1MDP
IC1	8-752-327-48	s IC CXD1250N
IC2	8-759-163-76	s IC 74AC11004DB-ELL2000
IC3	8-759-068-03	s IC NJM79L09UA
IC4	8-759-008-45	s IC MC74HC4538F
IC5	8-759-008-45	s IC MC74HC4538F
IC6	8-759-234-20	s IC TC7S08F
IC7	8-759-163-76	s IC 74AC11004DB-ELL2000
IC8	8-752-306-51	s IC CX23065
IC9	8-752-335-49	s IC CXD1252AR
IC10	8-752-335-49	s IC CXD1252AR
IC11	8-759-242-64	s IC TC4W53F
IC12	8-759-925-74	s IC SN74HC04NS
IC13	8-759-925-90	s IC SN74HC74NS
IC14	8-759-242-18	s IC TC74HC40103AF
IC15	8-759-925-90	s IC SN74HC74NS
IC16	8-759-008-45	s IC MC74HC4538F
IC17	8-759-925-83	s IC SN74HC27NS
IC18	8-759-163-76	s IC 74AC11004DB-ELL2000
IC19	8-752-063-34	s IC CXA1439M
IC20	8-752-054-61	s IC CXA1390AR
IC21	8-759-100-94	s IC UPC358G2
IC22	8-759-100-94	s IC UPC358G2
IC23	8-759-011-64	s IC MC74HC4052F
IC24	8-752-351-00	s IC CXL1517N
IC25	8-752-332-69	s IC CXL5504M
IC26	8-752-038-97	s IC CXA1391R
IC27	8-759-234-20	s IC TC7S08F
IC28	8-759-038-46	s IC SC7S00F
IC29	8-759-038-46	s IC SC7S00F
IC31	8-759-234-13	s IC TC4S30F
IC32	8-759-710-82	s IC NJM2406F
IC33	8-759-907-81	s IC SN74LS221NS
IC34	8-752-335-47	s IC CXD1216M
IC35	8-752-341-58	s IC CXD1217Q
IC36	8-759-902-88	s IC SN74LS123NS
IC37	8-759-100-94	s IC UPC358G2
IC39	8-759-011-65	s IC MC74HC4053F
IC40	8-759-711-50	s IC NJU7022M
IC41	8-759-242-64	s IC TC4W53F
L1	1-412-031-11	s INDUCTOR CHIP 47uH
L2	1-412-031-11	s INDUCTOR CHIP 47uH
L4	1-412-031-11	s INDUCTOR CHIP 47uH
L5	1-412-031-11	s INDUCTOR CHIP 47uH
L6	1-412-031-11	s INDUCTOR CHIP 47uH
L7	1-412-031-11	s INDUCTOR CHIP 47uH

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Ref. No. or Q'ty	Part No.	SP Description
L8	1-412-031-11	s INDUCTOR CHIP 47uH
L9	1-412-031-11	s INDUCTOR CHIP 47uH
L10	1-412-031-11	s INDUCTOR CHIP 47uH
L11	1-412-031-11	s INDUCTOR CHIP 47uH
L12	1-412-031-11	s INDUCTOR CHIP 47uH
L13	1-412-026-11	s INDUCTOR CHIP 1uH
L14	1-412-031-11	s INDUCTOR CHIP 47uH
L15	1-412-026-11	s INDUCTOR CHIP 1uH
L16	1-412-031-11	s INDUCTOR CHIP 47uH
L17	1-412-030-11	s INDUCTOR CHIP 22uH
L18	1-412-031-11	s INDUCTOR CHIP 47uH
L19	1-412-031-11	s INDUCTOR CHIP 47uH
L20	1-412-031-11	s INDUCTOR CHIP 47uH
L21	1-412-031-11	s INDUCTOR CHIP 47uH
L22	1-412-031-11	s INDUCTOR CHIP 47uH
L23	1-412-031-11	s INDUCTOR CHIP 47uH
L24	1-412-031-11	s INDUCTOR CHIP 47uH
L25	1-412-031-11	s INDUCTOR CHIP 47uH
Q1	8-729-429-44	s TRANSISTOR XP1501
Q2	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q3	8-729-905-24	s TRANSISTOR 2SA1576S
Q4	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q5	8-729-905-24	s TRANSISTOR 2SA1576S
Q6	8-729-905-24	s TRANSISTOR 2SA1576S
Q7	8-729-905-24	s TRANSISTOR 2SA1576S
Q8	8-729-143-14	s TRANSISTOR 2SC4176-B35
Q9	8-729-427-72	s TRANSISTOR XP4501
Q10	8-729-120-28	s TRANSISTOR 2SC1623-L5L6
Q11	8-729-427-74	s TRANSISTOR XP4601
Q12	8-729-905-24	s TRANSISTOR 2SA1576S
Q13	8-729-427-74	s TRANSISTOR XP4601
Q14	8-729-429-44	s TRANSISTOR XP1501
Q15	8-729-429-98	s TRANSISTOR XP1401
Q16	8-729-905-24	s TRANSISTOR 2SA1576S
Q17	8-729-905-24	s TRANSISTOR 2SA1576S
Q18	8-729-905-24	s TRANSISTOR 2SA1576S
Q19	8-729-905-24	s TRANSISTOR 2SA1576S
Q20	8-729-905-24	s TRANSISTOR 2SA1576S
Q21	8-729-905-24	s TRANSISTOR 2SA1576S
Q22	8-729-427-70	s TRANSISTOR XP4401
Q23	8-729-905-24	s TRANSISTOR 2SA1576S
Q24	8-729-427-72	s TRANSISTOR XP4501
Q25	8-729-429-98	s TRANSISTOR XP1401
Q26	8-729-905-24	s TRANSISTOR 2SA1576S
Q27	8-729-427-74	s TRANSISTOR XP4601 :DXC-C1
R1	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R2	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R3	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R4	1-216-850-11	s METAL, CHIP 270K 5% 1/16W
R5	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R6	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R7	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R8	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R9	1-216-864-11	s METAL, CHIP 0-OHM
R10	1-216-864-11	s METAL, CHIP 0-OHM
R11	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R12	1-216-849-11	s METAL, CHIP 220K 5% 1/16W
R13	1-216-849-11	s METAL, CHIP 220K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R14	1-216-850-11	s METAL, 270K 5% 1/16W
R15	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R16	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R17	1-216-840-11	s METAL, CHIP 39K 5% 1/16W
R18	1-216-853-11	s METAL, CHIP 470K 5% 1/16W
R19	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R20	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R21	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R22	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R24	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R25	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R26	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R27	1-216-843-11	s METAL, CHIP 68K 5% 1/16W
R28	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R29	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R30	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R31	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R32	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R33	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R34	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R35	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1MDP
R36	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R37	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R38	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R39	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R40	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R41	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R42	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R43	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R44	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R45	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R46	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R47	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R48	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R49	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R51	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R52	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R53	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1
R54	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1MDP
R57	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1
R58	1-216-864-11	s METAL, CHIP 0-OHM
R59	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R60	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R61	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R62	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R63	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R64	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R65	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R66	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R67	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R68	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R69	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R70	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R71	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R72	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R73	1-216-849-11	s METAL, CHIP 220K 5% 1/16W
R74	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R75	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R76	1-216-837-11	s METAL, CHIP 22K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP Description
R77	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R78	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R79	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R80	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R81	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R82	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R83	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R84	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R85	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R86	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R87	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R88	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R89	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R90	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R91	1-216-836-11	s METAL, CHIP 18K 5% 1/16W
R92	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R93	1-216-849-11	s METAL, CHIP 220K 5% 1/16W
R94	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R95	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R96	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R97	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R98	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R99	1-216-843-11	s METAL, CHIP 68K 5% 1/16W
R100	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R101	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R102	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R103	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R104	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R105	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R106	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R107	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R108	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R109	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R110	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R111	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R112	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R114	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R115	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R116	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R117	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R118	1-216-832-11	s METAL, CHIP 8.2K 5% 1/16W
R119	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R120	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R121	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R122	1-216-864-11	s METAL, CHIP 0-OHM
R123	1-216-864-11	s METAL, CHIP 0-OHM
R124	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R125	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R126	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R127	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R128	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R129	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R130	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R131	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R132	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R133	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R134	1-216-840-11	s METAL, CHIP 39K 5% 1/16W
R135	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R137	1-216-833-11	s METAL, CHIP 10K 5% 1/16W

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Ref. No. or Q' ty	Part No.	SP Description
R138	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R139	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R140	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R141	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R142	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R143	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R144	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R145	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R146	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R148	1-216-864-11	s METAL, CHIP 0-OHM
R149	1-216-864-11	s METAL, CHIP 0-OHM
R150	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R151	1-216-844-11	s METAL, CHIP 82K 5% 1/16W
R152	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R153	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R154	1-216-847-11	s METAL, CHIP 150K 5% 1/16W
R155	1-216-844-11	s METAL, CHIP 82K 5% 1/16W
R156	1-216-822-11	s METAL, CHIP 1.2K 5% 1/16W
R157	1-216-848-11	s METAL, CHIP 180K 5% 1/16W
R158	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R159	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R160	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R161	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R164	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R165	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R166	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R167	1-218-721-11	s METAL, CHIP 16K 0.50% 1/16W
R168	1-216-022-00	s METAL, CHIP 75 5% 1/10W
R169	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R170	1-216-823-11	s METAL, CHIP 1.5K 5% 1/16W
R171	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R172	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R173	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R174	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R175	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R176	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R177	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R178	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R179	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R180	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R181	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R182	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R183	1-216-841-11	s METAL, CHIP 47K 5% 1/16W
R184	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R185	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R186	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R187	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R188	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R189	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R190	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R191	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R192	1-216-837-11	s METAL, CHIP 22K 5% 1/16W :DXC-C1
R193	1-216-837-11	s METAL, CHIP 22K 5% 1/16W :DXC-C1
R194	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1
R195	1-216-833-11	s METAL, CHIP 10K 5% 1/16W :DXC-C1
R196	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R197	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R199	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R200	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W

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Ref. No. or Q' ty	Part No.	SP Description
R202	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R203	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R204	1-216-831-11	s METAL, CHIP 6.8K 5% 1/16W
R205	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R206	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R207	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R208	1-216-834-11	s METAL, CHIP 12K 5% 1/16W :DXC-C1MDP
R208	1-216-835-11	s METAL, CHIP 15K 5% 1/16W :DXC-C1
R211	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R212	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R213	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R214	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R215	1-218-733-11	s METAL, CHIP 51K 0.50% 1/16W
R217	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R218	1-216-830-11	s METAL, CHIP 5.6K 5% 1/16W
R219	1-216-838-11	s METAL, CHIP 27K 5% 1/16W
R220	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R221	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R222	1-216-839-11	s METAL, CHIP 33K 5% 1/16W
R223	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R224	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R225	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R226	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1
R227	1-216-864-11	s METAL, CHIP 0-OHM :DXC-C1MDP
R228	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R229	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R230	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R231	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W :DXC-C1MDP
R232	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R233	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R234	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R235	1-216-837-11	s METAL, CHIP 22K 5% 1/16W
R236	1-216-826-11	s METAL, CHIP 2.7K 5% 1/16W
R237	1-216-827-11	s METAL, CHIP 3.3K 5% 1/16W
R238	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R239	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R240	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R241	1-216-835-11	s METAL, CHIP 15K 5% 1/16W
R242	1-216-849-11	s METAL, CHIP 220K 5% 1/16W
R243	1-216-843-11	s METAL, CHIP 68K 5% 1/16W
R244	1-216-829-11	s METAL, CHIP 4.7K 5% 1/16W
R245	1-216-844-11	s METAL, CHIP 82K 5% 1/16W
R246	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R247	1-216-817-11	s METAL, CHIP 470 5% 1/16W
R248	1-216-845-11	s METAL, CHIP 100K 5% 1/16W
R249	1-216-845-11	s METAL, CHIP 100K 5% 1/16W :DXC-C1MDP
RV1	1-238-092-11	s RES, ADJ CERMET 47K
RV2	1-238-092-11	s RES, ADJ CERMET 47K
RV3	1-238-092-11	s RES, ADJ CERMET 47K
RV4	1-238-092-11	s RES, ADJ CERMET 47K
RV5	1-238-092-11	s RES, ADJ CERMET 47K
RV6	1-238-092-11	s RES, ADJ CERMET 47K
RV7	1-238-092-11	s RES, ADJ CERMET 47K
RV8	1-238-092-11	s RES, ADJ CERMET 47K
RV9	1-238-092-11	s RES, ADJ CERMET 47K
RV10	1-238-092-11	s RES, ADJ CERMET 47K

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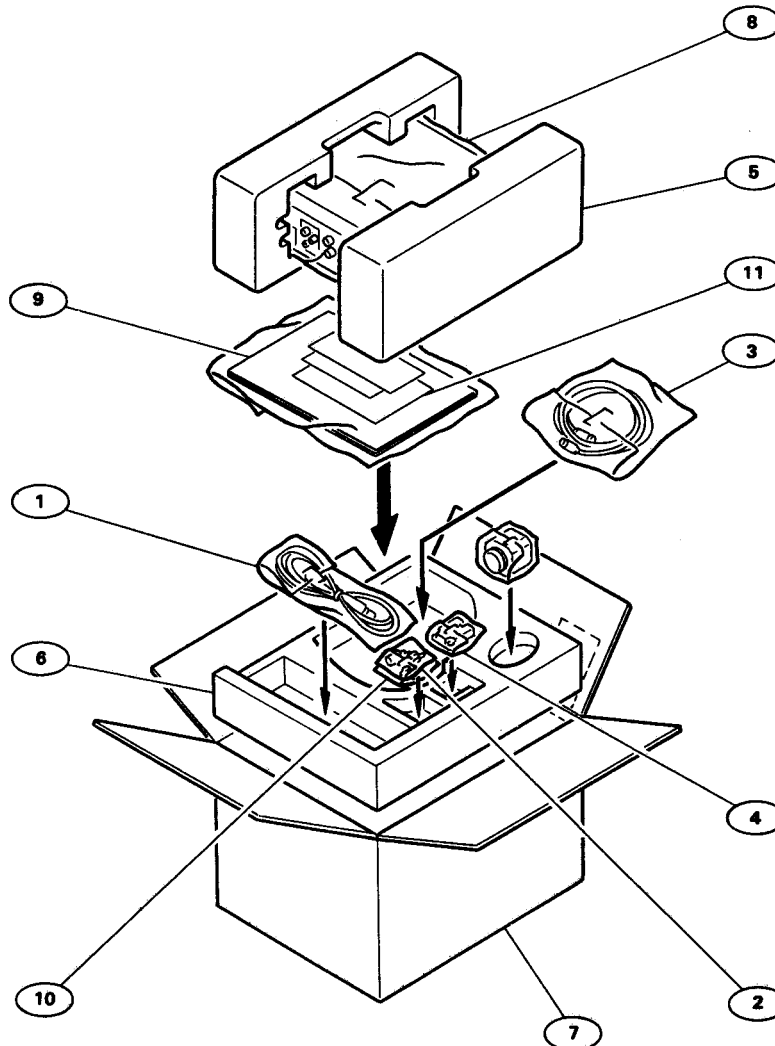
Ref. No. or Q'ty	Part No.	SP Description
RV11	1-238-092-11	s RES, ADJ CERMET 47K
RV12	1-238-092-11	s RES, ADJ CERMET 47K
RV13	1-238-092-11	s RES, ADJ CERMET 47K
RV14	1-238-092-11	s RES, ADJ CERMET 47K
RV15	1-238-092-11	s RES, ADJ CERMET 47K
RV16	1-238-092-11	s RES, ADJ CERMET 47K
RV17	1-238-090-11	s RES, ADJ CERMET 10K
RV18	1-238-092-11	s RES, ADJ CERMET 47K
S1	1-571-249-11	s SWITCH, SLIDE
S2	1-571-249-11	s SWITCH, SLIDE

FRAME

Ref. No. or Q'ty	Part No.	SP Description
1pc	△1-413-921-11	s SWITCHING REGULATOR
1pc	1-547-381-12	s FILTER BLOCK, OPTICAL
2pcs	△1-532-743-11	s FUSE, GLASS TUBE 2A 125V :DXC-C1
2pcs	△1-576-225-11	s FUSE (H. B. C.) :DXC-C1MDP
CN102	1-565-301-11	s CONNECTOR, ROUD TYPE 4P
CN103	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN104	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN105	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN106	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN107	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN108	1-562-261-51	s CONNECTOR, COAXIAL (BNC)
CN109	1-565-653-11	s CONNECTOR, SMALL TYPE 8P
CN110	1-764-749-11	s SOCKET, CONNECTOR 12P
CN111	1-764-315-11	s CONNECTOR (ROUND TYPE) 12P
HN1	△1-952-991-11	o HARNESS (AC)
	△1-580-375-11	s INLET 3P
HN2	△1-952-992-11	o HARNESS (PSW)
	△1-570-743-31	s SWITCH, AC POWER
HN3	1-952-990-11	o HARNESS (PS-REG)
HN4	1-952-743-11	o HARNESS, SUB (TG-PR(4))
HN5	1-952-744-11	o HARNESS, SUB (TG-PR(3))
HN6	1-952-745-11	o HARNESS, SUB (TG-PR(2))
HN7	1-952-746-11	o HARNESS, SUB (TG-PR(1))
HN8	1-952-747-11	o HARNESS, SUB (PR-CN)
HN9	1-952-748-11	o HARNESS, SUB (TG-CN(3))
HN10	1-952-749-11	o HARNESS, SUB (TG-PS)
HN11	1-952-750-11	o HARNESS, SUB (TG-CN(4))
HN12	1-952-751-11	o HARNESS, SUB (TG-CN(2))
HN13	1-952-752-11	o HARNESS, SUB (TG-CN(1))
HN14	1-952-753-11	o HARNESS, SUB (PR-SW(2))
HN15	1-952-754-11	o HARNESS, SUB (PR-SW(1))
HN16	1-952-755-11	o HARNESS, SUB (TG-SW(2))
HN17	1-952-756-11	o HARNESS, SUB (TG-SW(1))

PACKING MATERIAL AND ACCESSORIES

No.	Part No.	SP	Description
1	△1-556-813-11	s	CORD, POWER :DXC-C1
	△1-551-631-22	s	CORD, POWER :DXC-C1MDP
2	1-550-952-11	s	CAP, WATERPROOF
3	1-751-759-11	s	CABLE, CAMERA
4	3-183-096-01	s	ADAPTOR, TRIPOD
5	3-183-925-02	o	CUSHION (A)
6	3-183-926-01	o	CUSHION (B)
7	3-184-023-01	o	INDIVIDUAL CARTON :DXC-C1
	3-184-024-01	o	INDIVIDUAL CARTON :DXC-C1MDP
8	3-704-286-01	o	BAG (STANDARD), PROTECTION
9	3-758-057-11	s	MANUAL, INSTRUCTION
10	7-682-547-09	s	SCREW +B 3X6
11	3-795-581-21	o	SAFEGUARD, IMPORTANT :DXC-C1



V03259
013161

SONY

COLOR VIDEO CAMERA

DXC-C1

DXC-C1MDP

SERVICE MANUAL

SUPPLEMENT-1

Please add and replace your SERVICE MANUAL with this SUPPLEMENT-1.

SUBJECT

• ADDITION OF TG-167 Board

SECTION 4	HR Phase Adjustment	Page 4-5(1)	add
SECTION A	Overall Block	Page A-1 to A4	replace
	TG-126 Block	Page A-5 to A-8	replace
SECTION B	Board Layout	Page B-1	replace
	TG-126/TG-167 Board	Page B-11 to B-22	replace
	FRAME WIRING	Page B-51 to B-53	replace
SECTION D	Camera Control Unit	Page D-2	replace
	TG-167 Board	Page D-21 (1)	add

[Pre Adjustment]

- HR Phase Adjustment

Measuring Equipment: Oscilloscope

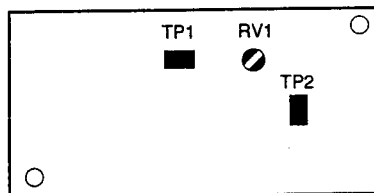
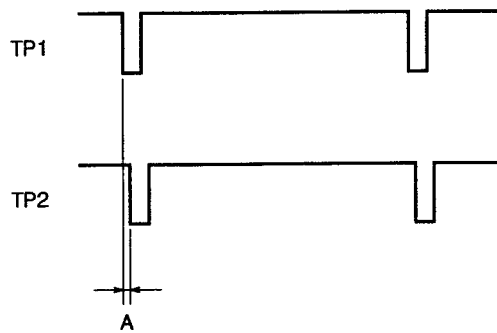
Measuring Point: TP1/TG-167 board (CH1)

TP2/TG-167 board (CH2)

Adjusting Point: $\odot$ RV1/TG-167 board

Specification: $A=0 \pm 0.1 \mu\text{s}$

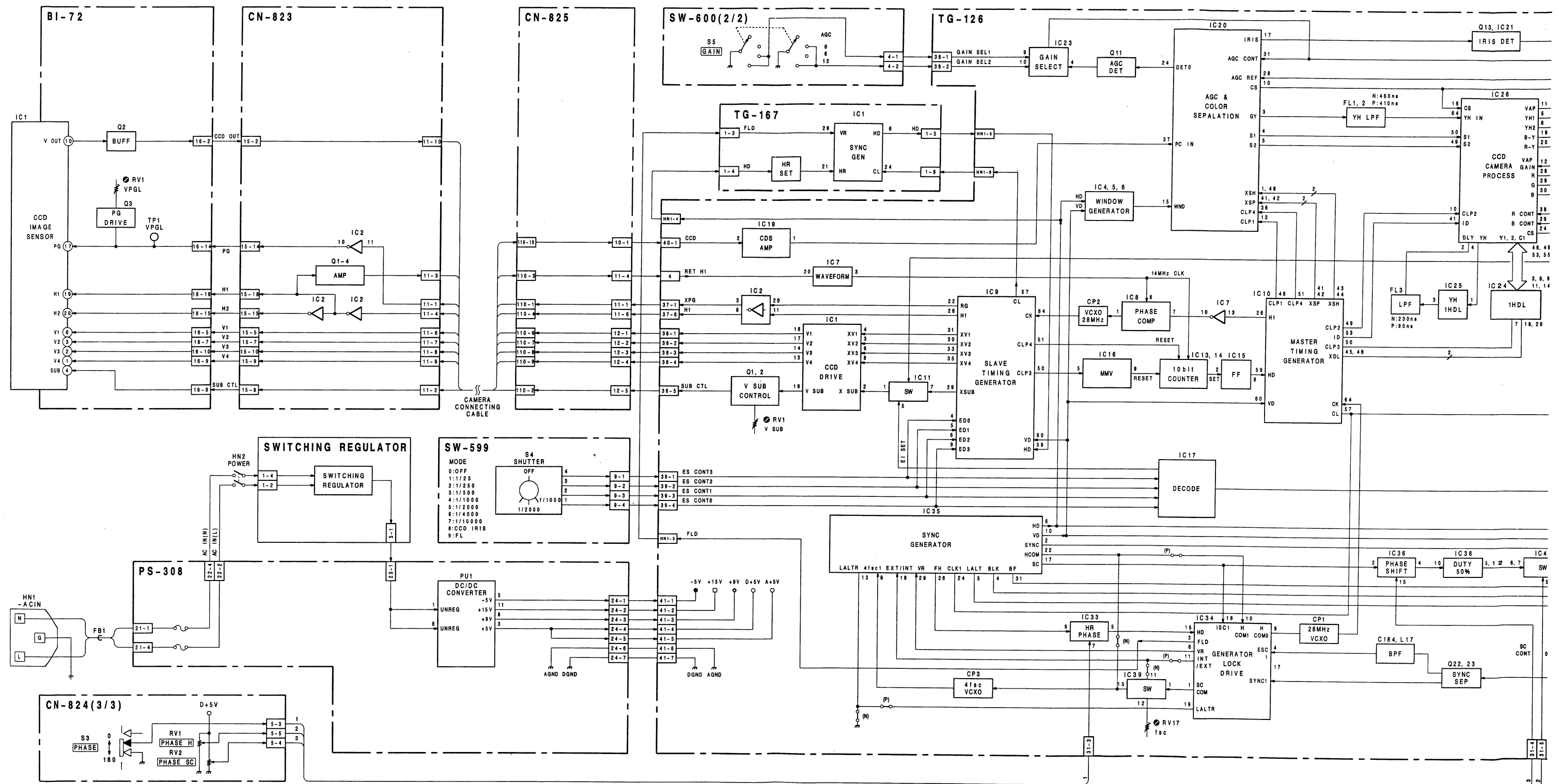
Adjusting Method: Adjust RV1/TG167 so that the phase difference A is within $0 \pm 0.1 \mu\text{s}$ as follows.



TG-167 BOARD

SECTION A BLOCK DIAGRAMS

OVERALL BLOCK



DXC-C1(UCJ)
DXC-C1MDP(EK)

A-1

A-2

A

B

C

D

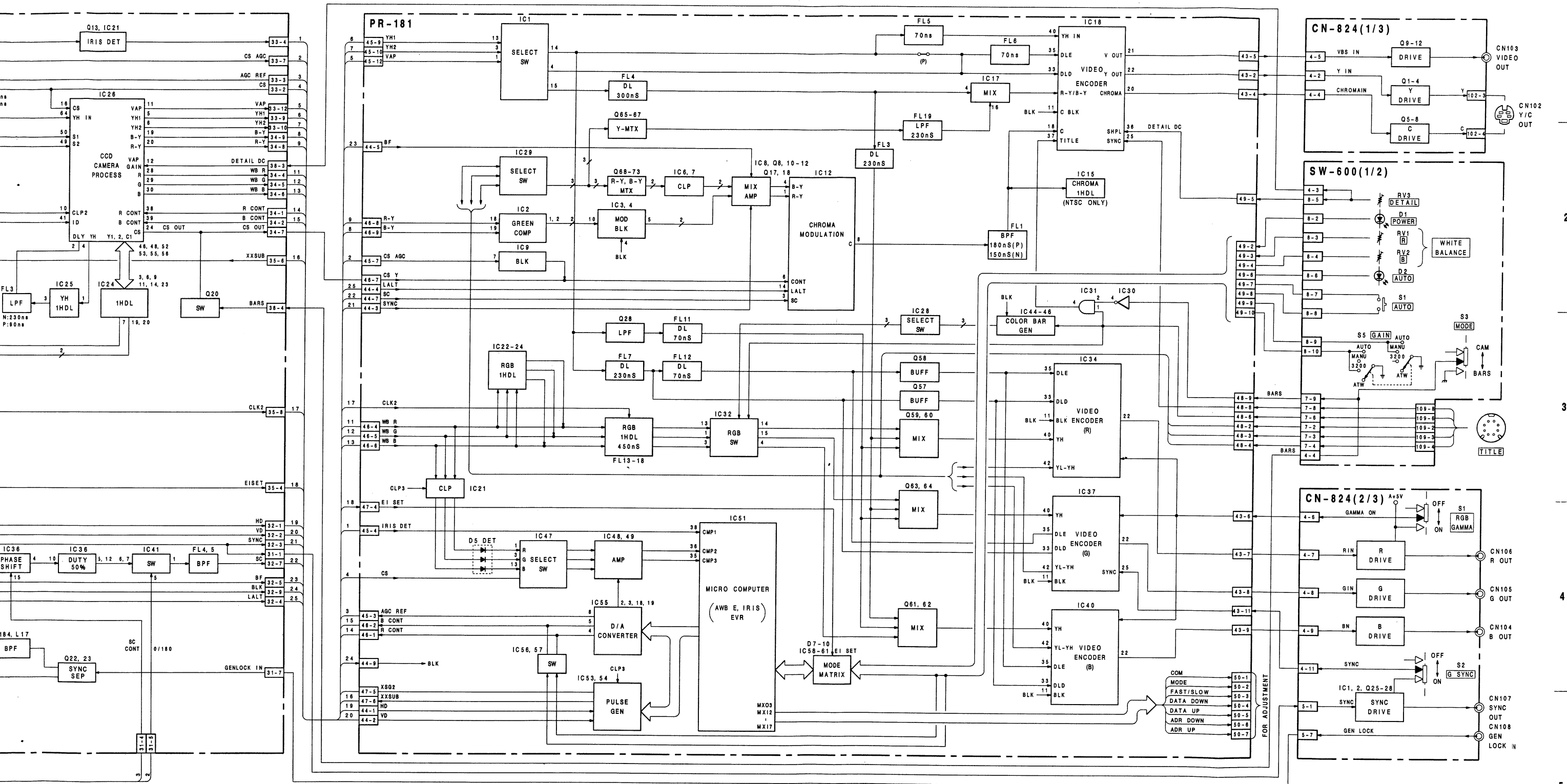
E

F

G

H

OVERALL OVERALL

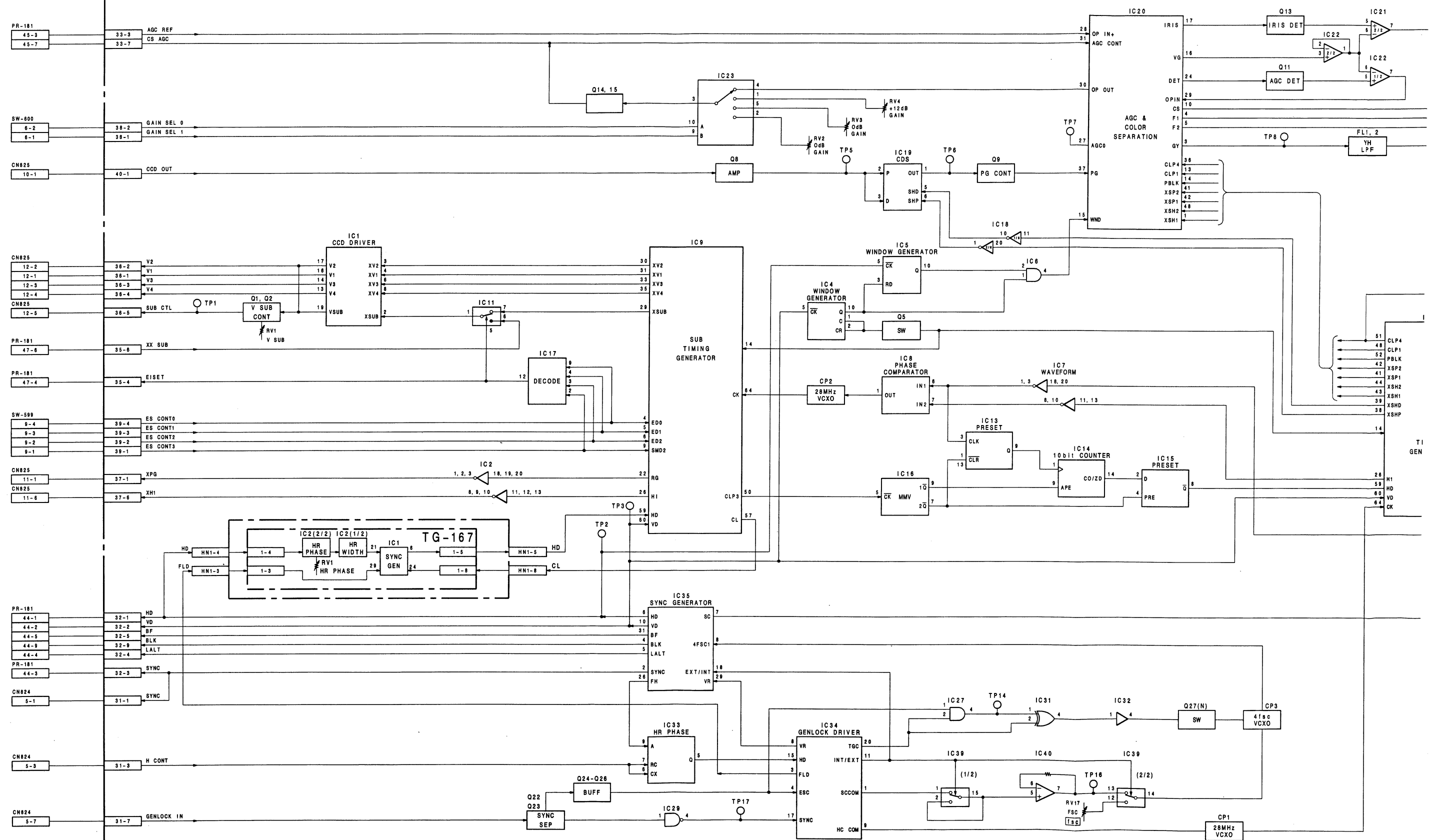


OVERALL BLOCK

DXC-C1(UCJ)
DXC-C1MDP(EK)
B-#DXCC1-OABLOCK/M

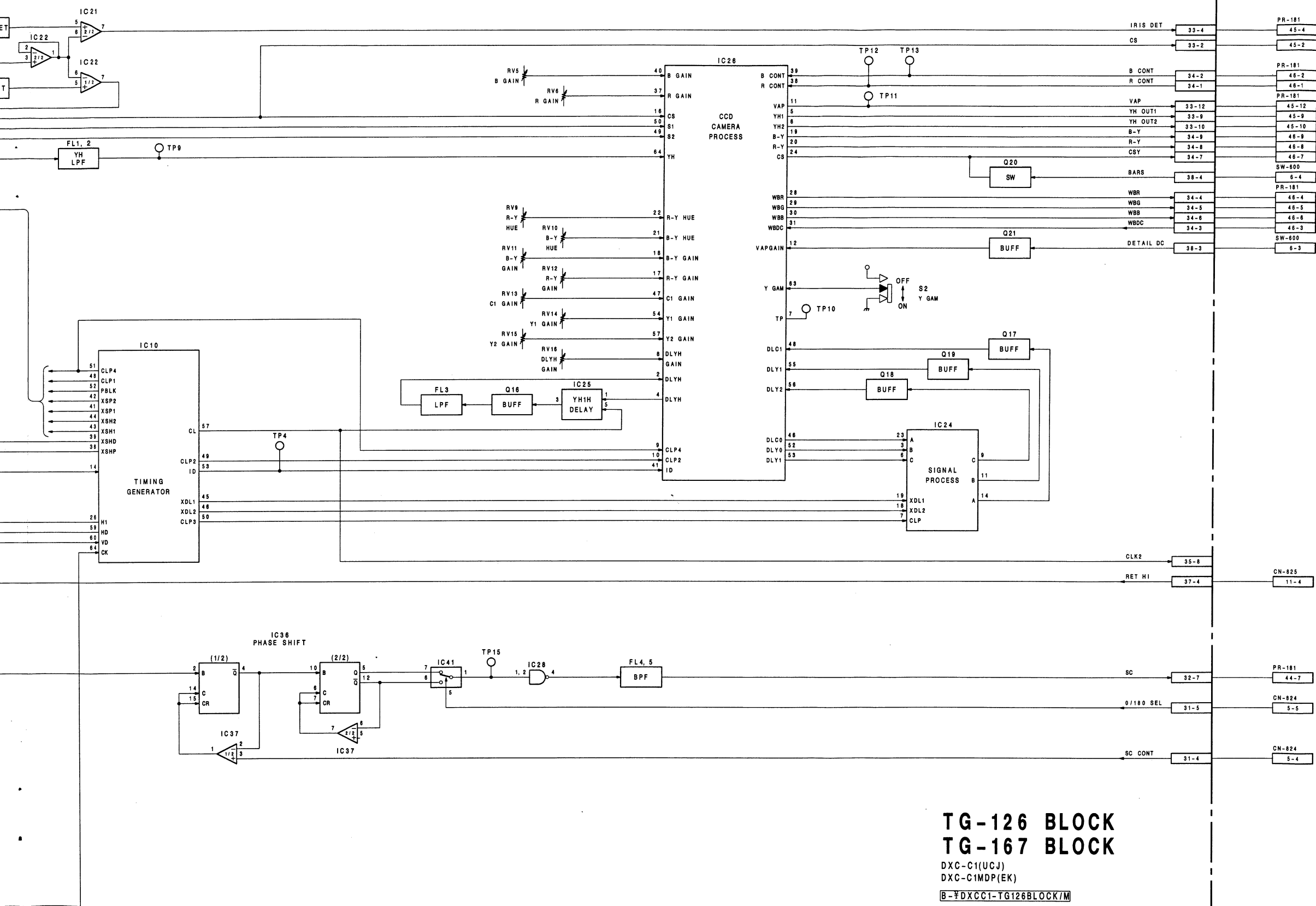
A-3

A-4

TG-126 BLOCK
TG-167 BLOCK

A-5

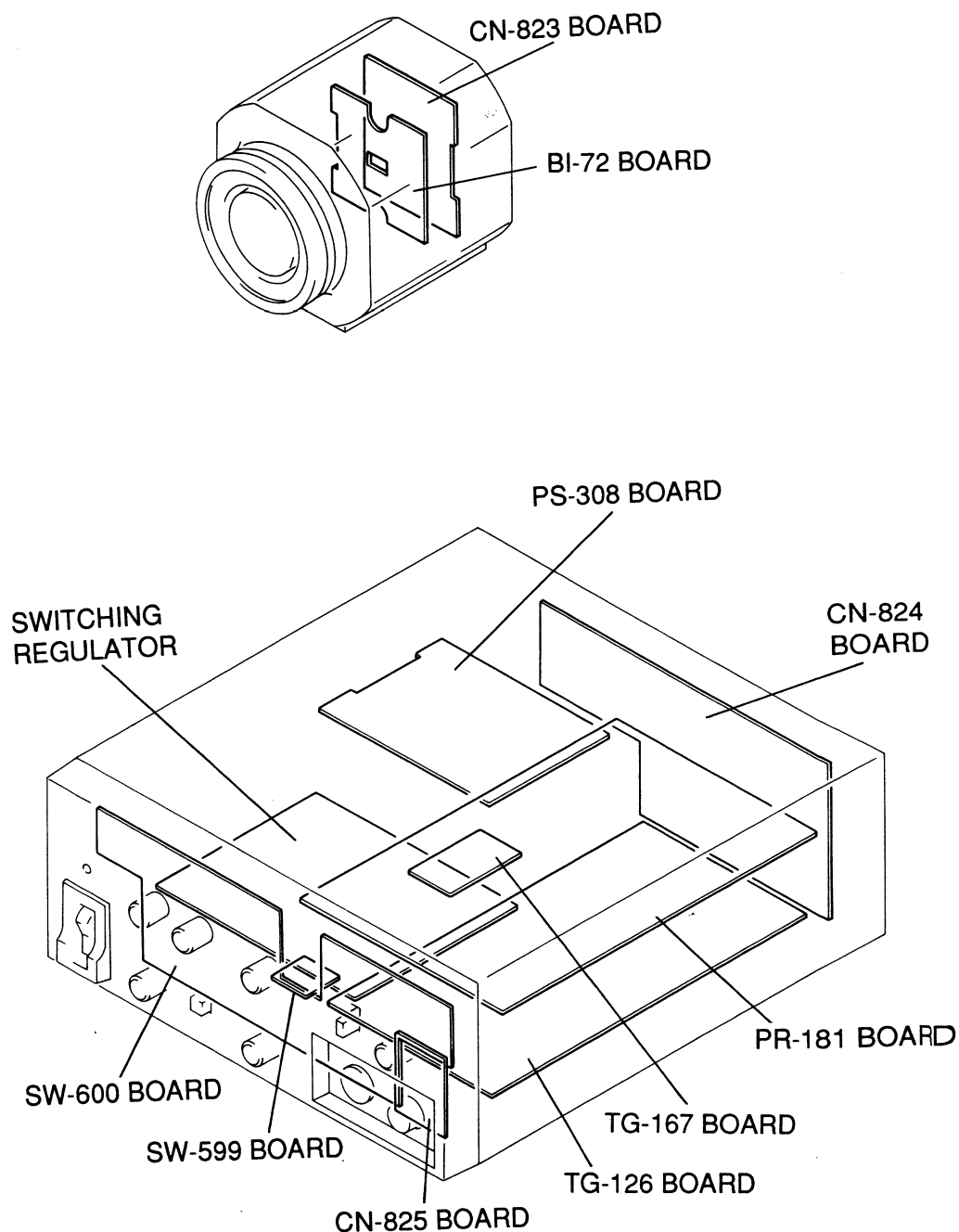
A-6



DXC-C1(UCJ)
 DXC-C1MDP(EK)

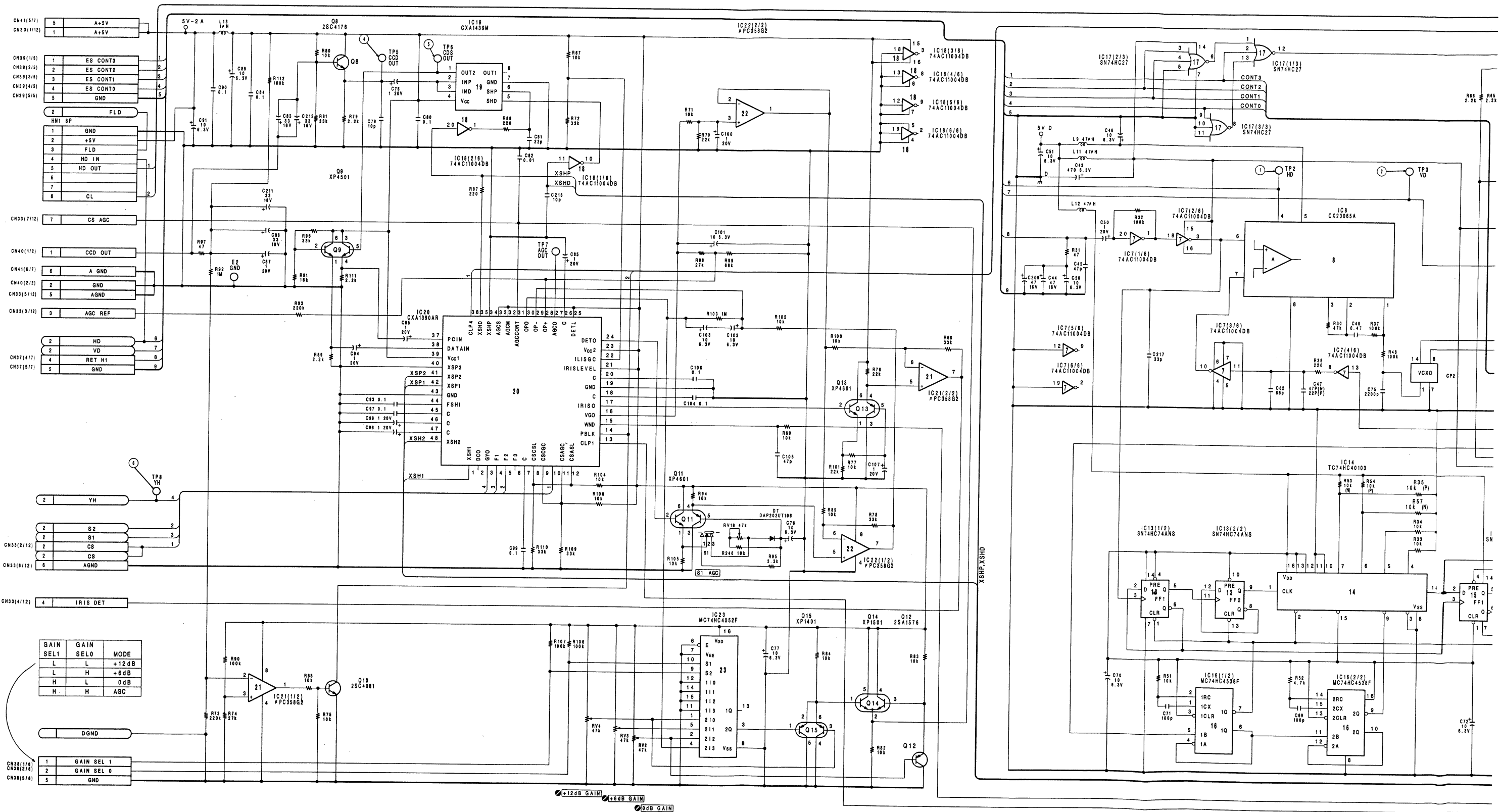
SECTION B SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATION

BOARD LAYOUT

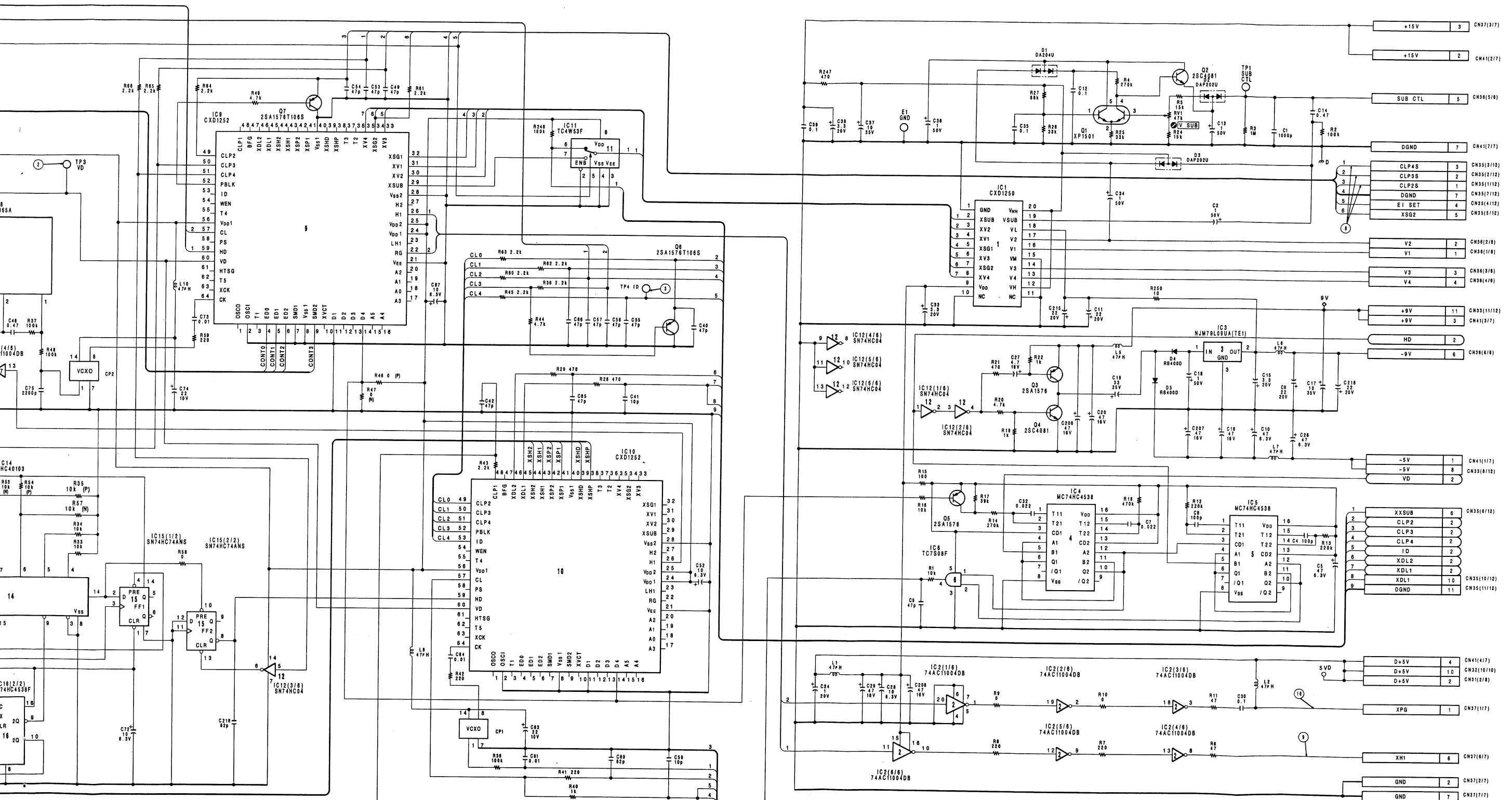


DXC-C1(J,UC)
DXC-C1MDP(EK)

TG-126 BOARD(1/2)



DXC-C1(J, UC)
DXC-C1MDP(EK)



TG-126 BOARD(1/2)

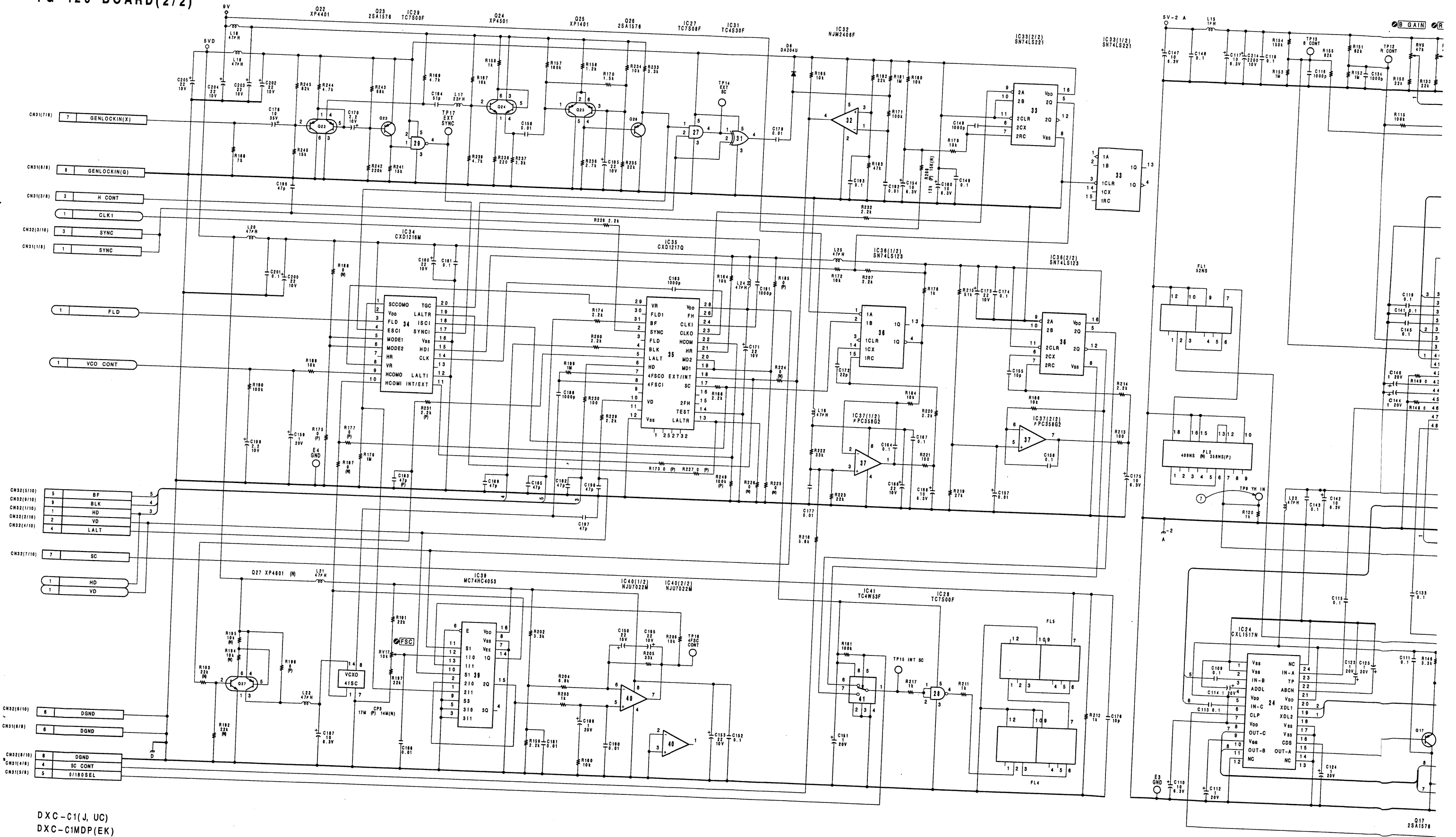
DXC-C1(J, UC)
DXC-C1MDP(EK)

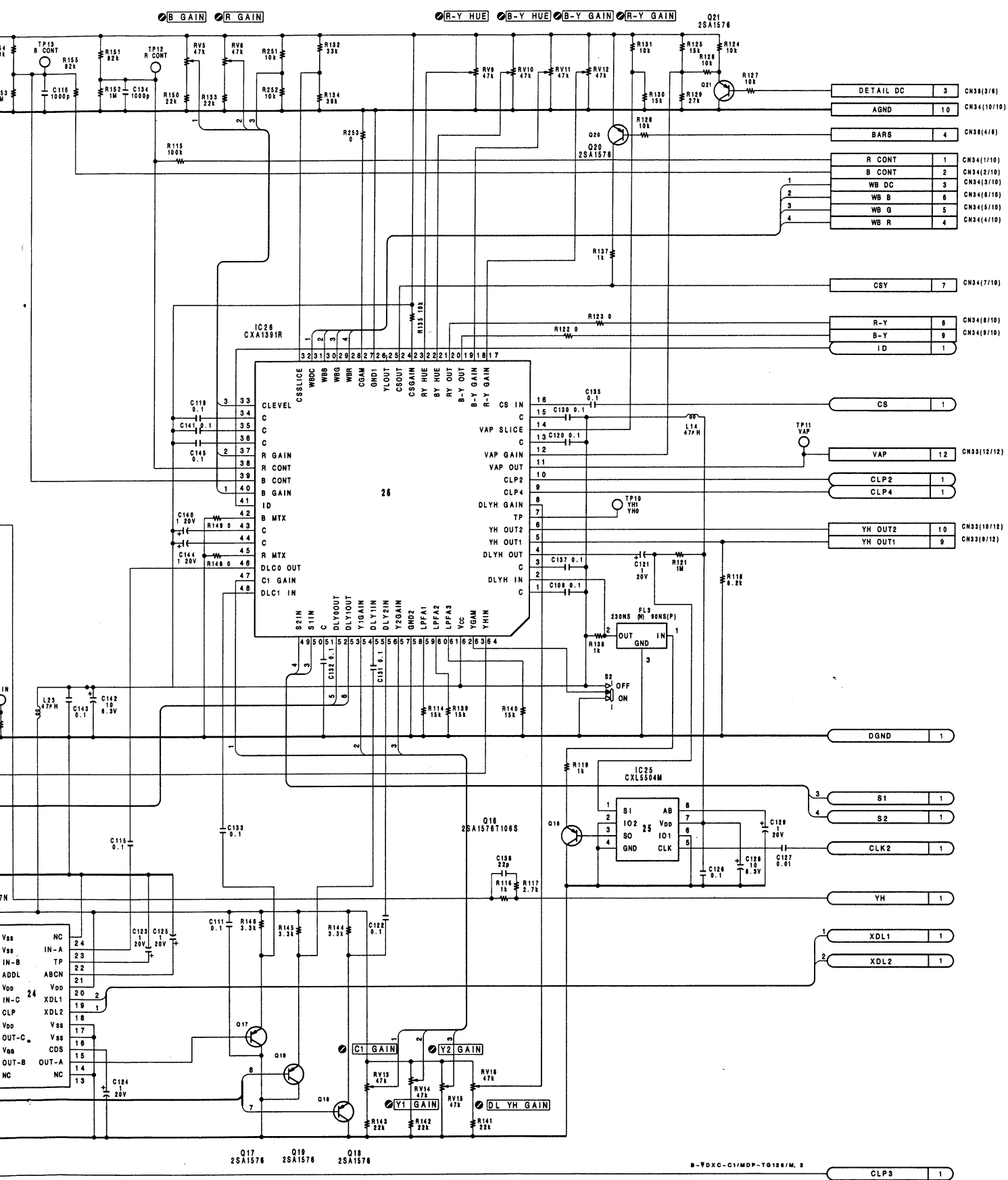
B-¥DXC-C1/MDP-TG126/M, 2

1	VCO CONT	2	
2	CLK1	2	
3	DGND	9	CK35(9/12)
4	CLK2	8	CK35(8/12)
5	CLK2	2	

B-FDXC-C1/MDP-TG126/M, 1

TG-126 BOARD(2/2)





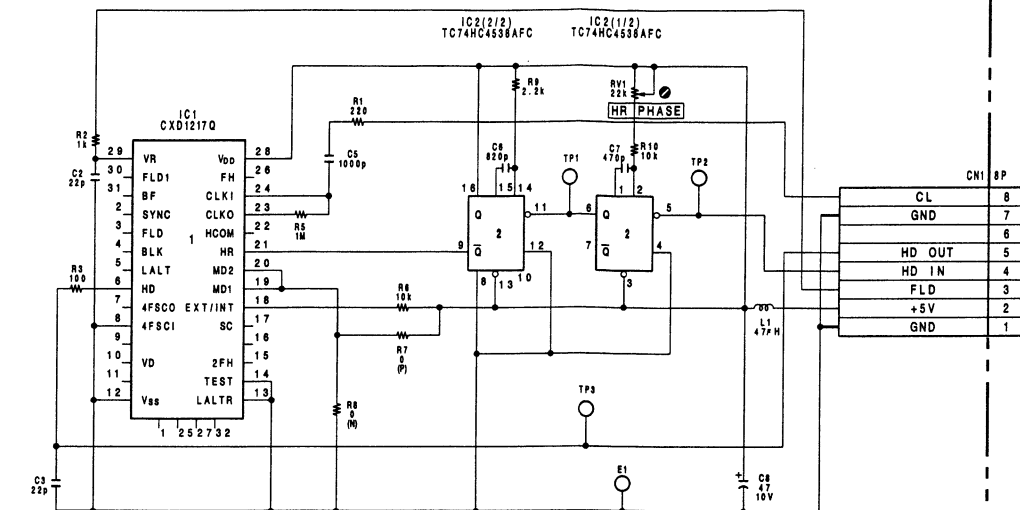
TG-126 BOARD(2/2)

DXC-C1(J, UC)
DXC-C1MDP(EK)

B-7DXC-C1/MDP-TG126/M, 5

TG-167 BOARD

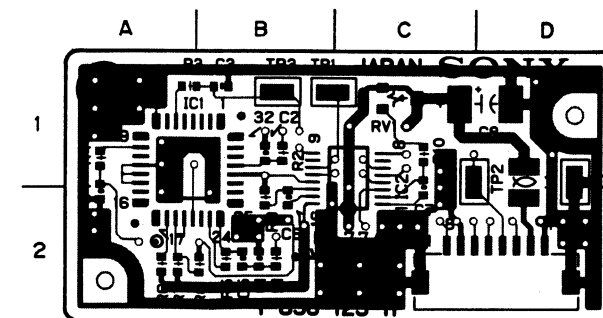
TG-167



T G - 1 6 7 B O A R D

DXC-C1(J, UC)
DXC-C1MDP(EK)

B-¥DXC-C1/MDP-TG167/M

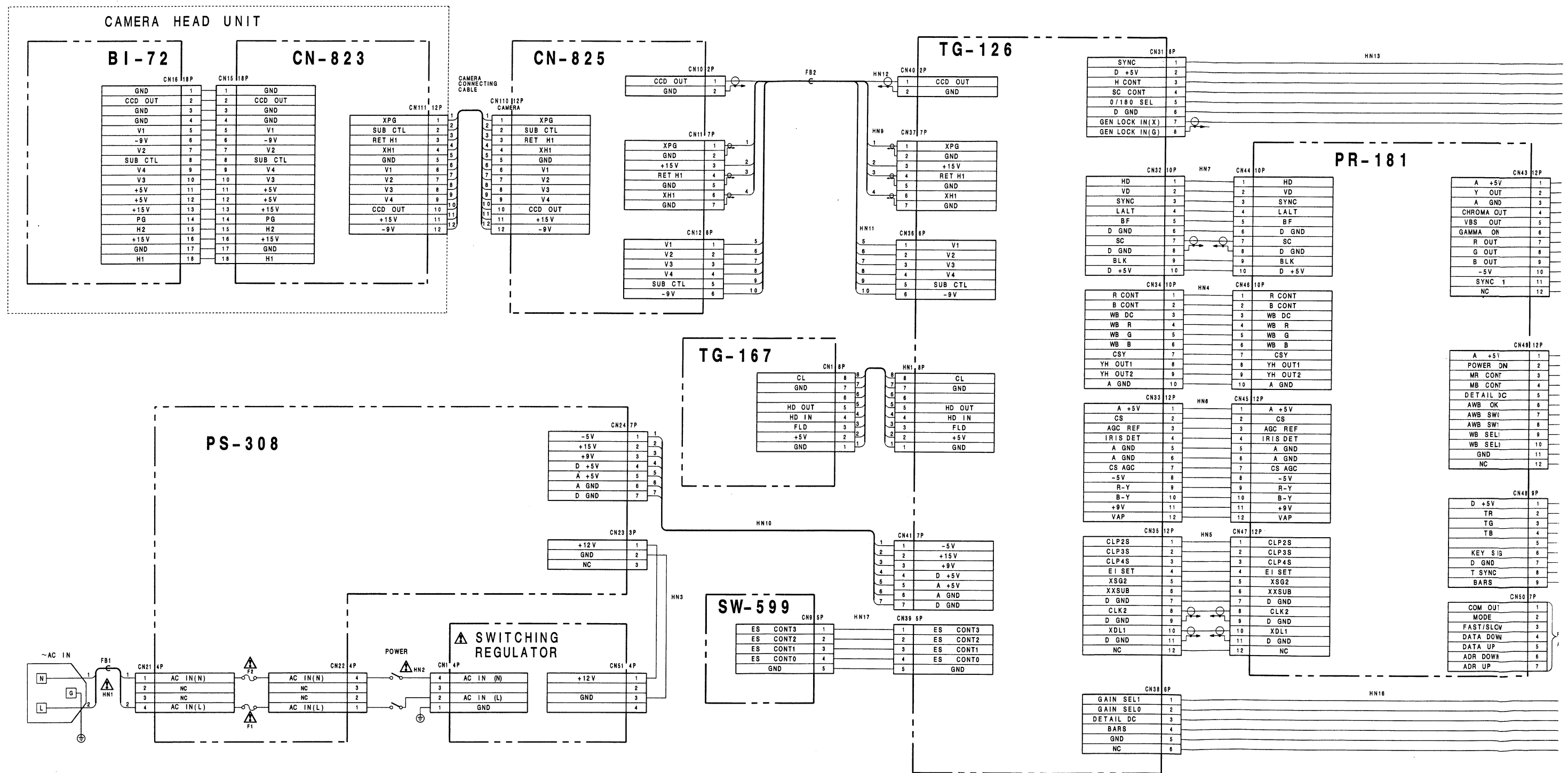


T G - 1 6 7 - A S I D E -

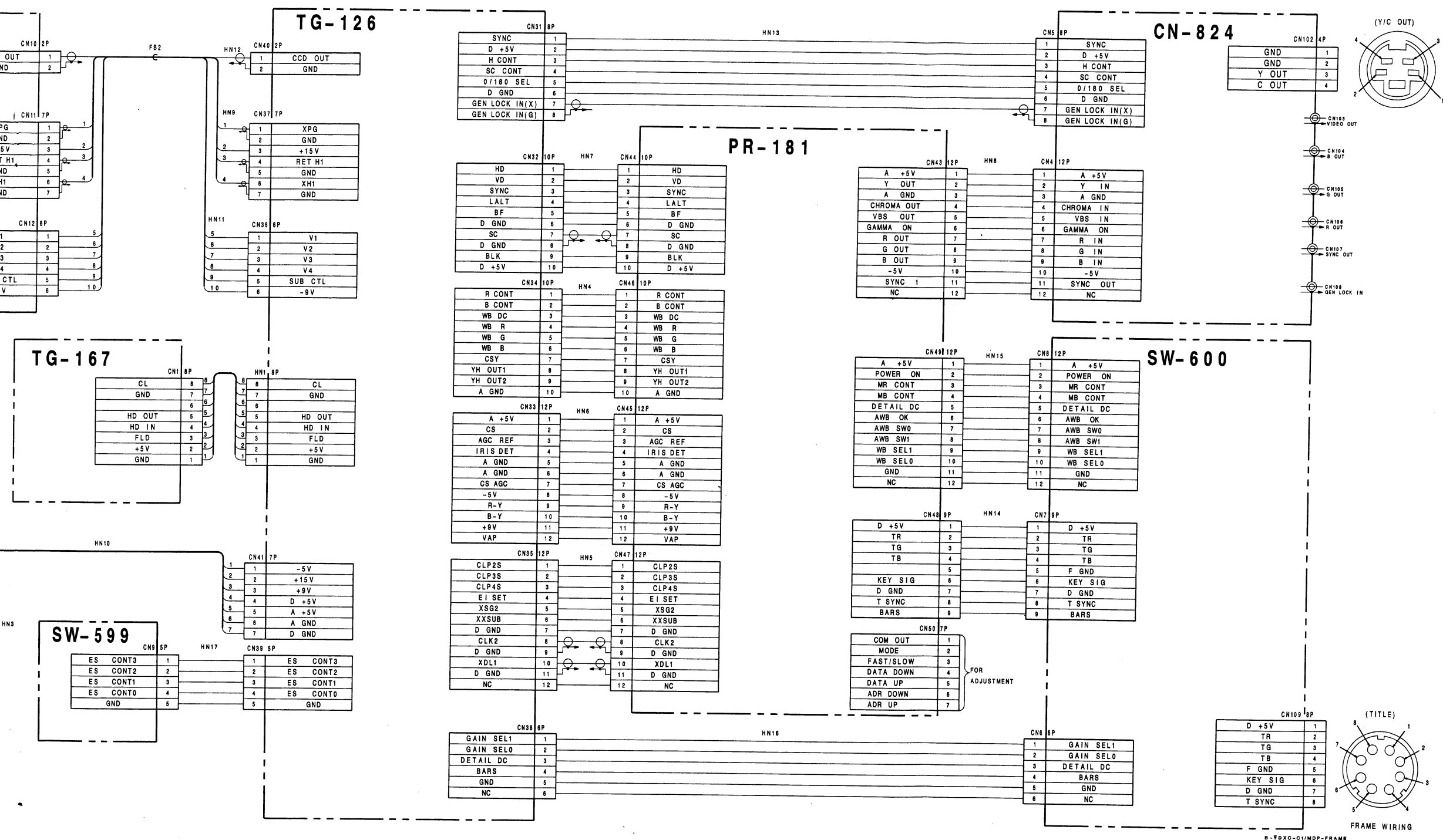
1-658-125-11

DXC-C1(J, UC)
DXC-C1MDP(EK)

FRAME WIRING



DXC-C1(J, UC)
DXC-C1MDP(EK)



FRAME WIRING

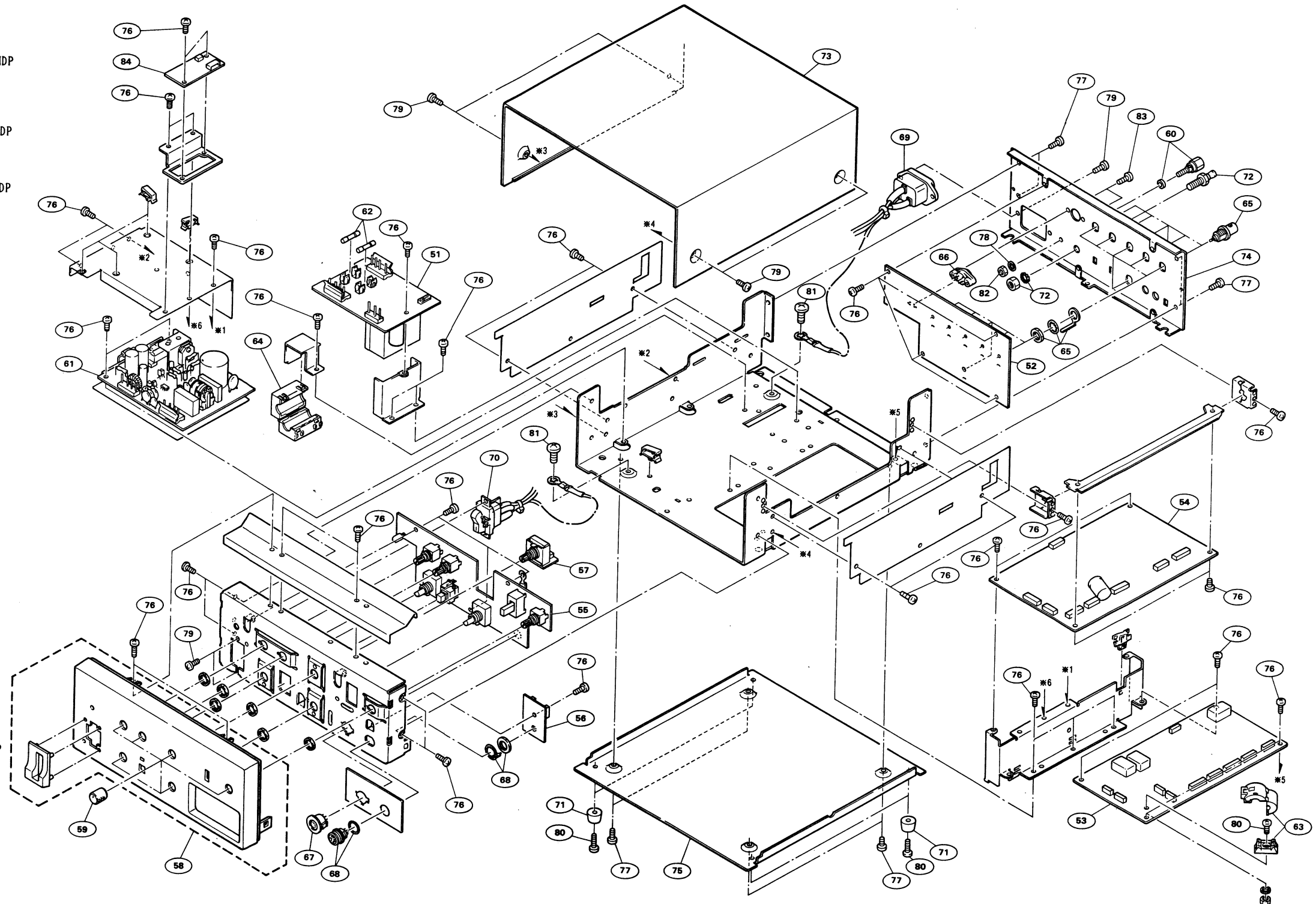
DXC-C1(J, UC)
DXC-C1MDP(EK)

B-~~Y~~DXC-C1/MDP-FRAME, 1

Camera Control Unit

No. Part No. SP Description

- 51 A-8274-358-A o MOUNTED CIRCUIT BOARD, PS-308 (N)
:DXC-C1
A-8274-361-A o MOUNTED CIRCUIT BOARD, PS-308 (P)
:DXC-C1MDP
- 52 A-8275-425-A o MOUNTED CIRCUIT BOARD, CN-824
- 53 A-8275-427-A o MOUNTED CIRCUIT BOARD, TG-126 (N)
:DXC-C1
A-8275-430-A o MOUNTED CIRCUIT BOARD, TG-126 (P)
:DXC-C1MDP
- 54 A-8275-428-A o MOUNTED CIRCUIT BOARD, PR-181 (N)
:DXC-C1
A-8275-431-A o MOUNTED CIRCUIT BOARD, PR-181 (P)
:DXC-C1MDP
- 55 A-8276-802-A o MOUNTED CIRCUIT BOARD, SW-600
- 56 A-8276-803-A o MOUNTED CIRCUIT BOARD, CN-825
- 57 A-8276-804-A o MOUNTED CIRCUIT BOARD, SW-599
- 58 X-3167-386-1 o PANEL ASSY, CCU FRONT
- 59 X-3682-814-0 s KNOB ASSY, CONTROL
- 60 X-4801-204-0 o TERMINAL ASSY
- 61 Δ1-413-921-11 s SWITCHING REGULATOR
- 62 Δ1-532-743-11 s FUSE, GLASS TUBE :DXC-C1
Δ1-576-225-11 s FUSE (H.B.C.) :DXC-C1MDP
- 63 1-543-619-11 s CORE, RING
- 64 1-543-653-11 s CORE ASSY, BEAD
- 65 1-562-261-51 s CONNECTOR, COAXIAL (BNC)
- 66 1-565-301-11 s CONNECTOR, ROUD TYPE 4P
- 67 1-565-653-11 s CONNECTOR, SMALL TYPE 8P
- 68 1-764-749-11 s SOCKET, CONNECTOR 12P
- 69 Δ1-952-991-11 o HARNESS (AC)
- 70 Δ1-952-992-11 o HARNESS (PSW)
- 71 2-092-326-99 s FOOT, RUBBER
- 72 3-175-740-01 o TERMINAL
- 73 3-183-099-02 o COVER
- 74 3-183-100-01 o PANEL, CCU REAR
- 75 3-183-103-01 o PLATE, BOTTOM
- 76 7-621-773-86 s SCREW +B 2.6X4
- 77 7-621-775-10 s SCREW +B 2.6X4
- 78 7-623-422-07 s LW3, TYPE B
- 79 7-682-547-09 s SCREW +B 3X6
- 80 7-682-548-09 s SCREW +B 3X8
- 81 7-682-559-04 s SCREW +B 4X5
- 82 7-684-023-04 s N3, TYPE 2
- 83 7-685-533-19 s SCREW +BTP 2.6X6 TYPE2 N-S
- 84 A-8272-204-A o MOUNTED CIRCUIT BOARD, TG-167 (N)
:DXC-C1
A-8272-205-A o MOUNTED CIRCUIT BOARD, TG-167 (P)
:DXC-C1MDP



TG-167 BOARD

Ref. No.

or Q'ty Part No. SP Description

1pc	A-8272-204-A	o MOUNTED CIRCUIT BOARD, TG-167(N) :DXC-C1
1pc	A-8272-205-A	o MOUNTED CIRCUIT BOARD, TG-167(P) :DXC-C1MDP
C1	1-162-926-11	s CERAMIC 82PF 5% 50V
C2	1-162-919-11	s CERAMIC 22PF 5% 50V
C3	1-162-919-11	s CERAMIC 22PF 5% 50V
C5	1-162-964-11	s CERAMIC 1000PF 10% 50V
C6	1-162-964-11	s CERAMIC 1000PF 10% 50V
C7	1-164-315-11	s CERAMIC 470PF 5% 50V
C8	1-135-166-21	s TANTALUM 47uF 10% 10V
CN1	1-764-093-21	s PIN, CONNECTOR (PC BOARD) 8P
IC1	8-752-341-58	s IC CXD1217Q
IC2	8-759-180-08	s IC TC74HC4538AFS
L1	1-412-031-11	s INDUCTOR CHIP 47uH
R1	1-216-813-11	s METAL, CHIP 220 5% 1/16W
R2	1-216-821-11	s METAL, CHIP 1K 5% 1/16W
R3	1-216-809-11	s METAL, CHIP 100 5% 1/16W
R5	1-216-857-11	s METAL, CHIP 1M 5% 1/16W
R6	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
R7	1-216-864-11	s METAL, CHIP 0 5% 1/16W :DXC-C1MDP
R8	1-216-864-11	s METAL, CHIP 0 5% 1/16W :DXC-C1
R9	1-216-825-11	s METAL, CHIP 2.2K 5% 1/16W
R10	1-216-833-11	s METAL, CHIP 10K 5% 1/16W
RV1	1-238-091-11	s RES, ADJ, METAL 22K

